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A STUDY TO DETERMINE WHETHER NURSE PRACTITIONERS ARE APPROPRIATELY UTILIZED AT MONCRIEF ARMY HOSPITAL, FORT JACKSON, SOUTH CAROLINA

A Problem Solving Project

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The Army Medical Department uses three types of health care extenders: AMOSISTs, Physician Assistants, and Nurse Practitioners. All release the physician to perform at a higher level of medical skill. A nurse practitioner is trained in the skills of minor diagnosis, physical examination, and treatment of medical problems, in addition to normal nursing skills. This study plots actual functions performed by nurse practitioners at Moncrief Army Community Hospital against those for which the were formally trained. It concludes that nurse practitioners at this facility are not being used properly. Keywords:

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I. INTRODUCTION

History of the Nurse Practitioner

Over one hundred years ago, a nurse was considered as an assistant to the physician. This was publicly espoused even by organized nursing. For example, in 1907, the President of the American Nurses' Association identified the role of the nurse to be to "...assist the physician in his most important work."[1]

However, by the 1930's this role had dramatically changed. This era has been called the "darkest period of nursing."[2] As hospitals grew in importance, the nurse's role evolved from dealing with patients to dealing with things. As a result, the nurse's desk became the focal point because of the nurse's responsibilities to handle patients' charts, order tests, answer the telephone, and manage other functions of the nurse's station. Consequently, patient care predominantly became the responsibility of lesser trained staff members.

By the 1960's, the role of the nurse began to change again. As opposed to being concerned with things, the nurse was once again concerned with patients. The nurse began to assume a role characterized by action. The nurse practitioner reflects this role. She is action oriented. She assesses the patient, determines a course of action to improve the patient's state of health, and assumes responsibility and accountability for that action.[3]

The actual causes for the development of nurse practitioners are

numerous. One cause was to satisfy the demand for more health care for more people at a time of growing awareness of a significant physician shortage. In this vein, two approaches were utilized. First, utilization of ancillary medical personnel was expanded to permit them to become physician extenders. Second, utilization of nurses was expanded to provide more primary care. This utilization was classified under the rubric of nurse practitioners.[4]

The utilization of nurse practitioners was expanded in three directions. First, nurses were provided higher level of training in physical assessment, interviews, and treatment of delineated acute and chronic care diseases. Second, nurses were encouraged to locate in settings which desperately required their skills. Third, nurses were trained to provide additional services for treatment of the seriously ill.[5]

The federal government provided a major impetus to the development and expansion of the nurse practitioner concept. The Nurse Training Act of 1964 was the first federal legislation to provide nurse practitioner funding. Four years later, Title II of the Health Manpower Act of 1968 authorized special project grants to fund the development of nurse practitioner programs.[6]

In February 1971, the President's annual health message requested fifteen million dollars for the purpose of training new health care providers. The Nurse Training Act of 1971 was subsequently passed. An Office of Special Programs was established in the National Institute of Health's Bureau of Health Manpower Education. This Office of Special Programs administered funds which included an amount specifically earmarked for increasing the number of nurse practitioners.[7] Also, in 1971

a special report from the Department of Health, Education, and Welfare recommended an expanded role for nurses in primary care.[8]

Society-oriented causes for the development of nurse practitioners included the exorbitant costs of training physicians, the increasing expense of medical care, and the dearth of trained personnel to provide preventive, emergency and primary vis-à-vis specialty care. Other causes were the uneven geographic and specialty distribution of providers as well as the suboptimal productivity and efficiency of providers.[9] However, some researchers assert that a primary cause for establishing some of the nurse practitioner programs was not the lack of health care providers but rather the possible lack of quality patient care in certain university and clinic settings.[10]

The actual origins of the nurse practitioner programs can be traced to the early 1960's. Doctor Eugene Stead and Thelma Ingles, head of medical-surgical nursing, conducted essentially a nurse practitioner program in Duke University's master's of nursing program. Although the program was shown to be clinically successful, it was denied accreditation. The reason given was that nurses should not be engaged in expanded medical practice. The program was subsequently abandoned.[11]

Then, in 1965, the University of Colorado began its pediatric nurse practitioner program. This four month program was developed by Dr. Henry Silver. Its purpose was to train graduate nurses in providing well baby care and in treating common pediatric illnesses.[12]

Since that time, the nurse practitioner programs have proliferated. There are over two hundred formal nurse practitioner programs at over

forty-five institutions in forty states. These programs provide specialized training. Pediatric programs comprise 38.2 per cent of the total while 22.1 per cent are family practice, 17.6 per cent are adult medicine, 10.7 per cent are maternity, 8.4 per cent are midwifery, and 3 per cent are psychiatric.[13] There are 84 programs which award a master's degree and 131 programs which award a certificate. More than 95 per cent of the programs have been developed since 1970 with over 60 per cent being founded since 1973.[14]

History of the Army Nurse Practitioner

Differentiation of physician extenders

Before explaining the historical development of the Army nurse practitioner, it is necessary to differentiate between three health care extenders utilized by the Army Medical Department. These are the AMOSISTs, Physician Assistants, and the nurse practitioner.

The AMOSISTs are corpsmen who receive a twelve week training program. This program teaches the corpsmen how to use clinical algorithms or protocols which have been prepared by physicians. In addition, the program teaches limited aspects of a physical examination. In essence, the AMOSIST is trained to manage a few very easily diagnosed illnesses which comprise a large percentage of routine outpatient services. There is virtually no independent decision making since the algorithm directs the AMOSIST's clinical approach. A physician is required to be physically located in the clinic for consultation and verification. The AMOSIST only has authority to prescribe drugs listed in the algorithm.[15]

The Physician Assistants (PA) are corpsmen who are given a two year

training program and are appointed as warrant officers. The PA is intended to provide primary, non-specialized care for a wide range of medical illnesses. The PA does function with a significant level of independence; however, a physician is ultimately responsible for the PA's decisions and actions.[16]

As indicated in the Definitions section, infra, nurse practitioners are Army Nurse Corps officers who are trained to broaden the scope of their nursing skills. They are required to possess a baccalaureate degree and nursing experience. The nurse practitioner program strengthens the nurse's professional nursing skills as well as trains the nurse in the skills of minor diagnosis, physical examination, and treatment of medical problems. The nurse practitioner is provided training in counseling, preventive care and health education. The nurse practitioner supervision is bifurcated;i.e., the medical skills are supervised by a physician while the nursing skills are supervised by a nurse. The physician assistant and the AMOSIST do not have the professional nursing skills which the nurse practitioner is required to provide patients. Nevertheless, like the PA and AMOSIST, the nurse practitioner releases the physician to perform at a higher level of medical skill.[17]

History

Although the civilian medical community implemented the nurse practitioner concept in the early 1960's, the Army Medical Department did not adopt the concept until 1972.

The Army Nurse Corps had recognized a multitude of societal forces which were impacting upon the delivery of health care. The five most

significant forces were:

1. The belief that health care is a right and not merely a privilege.

2. The quantum advances in medical technology and the growth of super specialists.

3. The social emphasis on patients' rights.

4. The belief that the maldistribution of resources within the health care system adversely impacts on patients' rights.

5. The assertiveness of patients in demanding high quality care and expressing their dissatisfaction.[18]

The Army Nurse Corps, like its civilian counterparts, was not content with the traditional role of nurses, i.e., a manager-coordinator. This role was particularly prevalent in clinics where the nurse was necessarily more concerned with patient flow than with providing professional nursing care. There simply was neither time nor personnel to do more.

Eventually, the Army Nurse Corps developed its own nurse practitioner concept after reviewing civilian nursing trends, educational preparation, and social forces. The nurse practitioner program re-emphasized clinical excellence and reasserted that clinical practice is the Army Nurse Corps raison d'etre.[19]

In 1972, a pediatric nurse practitioner program commenced. Since then, the concept has firmly taken root not only in the Army but also in the other services. Currently, the Air Force employs approximately 400 nurse practitioners, the Army employs approximately 180, and the Navy employs approximately 80.[20]

In March 1973, the Office of The Surgeon General published guidelines pertaining to the proper utilization of the Army's nurse practitioners. Essentially, the concept was for the nurse practitioner to be "...utilized to the fullest advantage to provide selected diagnostic, therapeutic, health maintenance, and educational services." The priority of assignment was to be in ambulatory care settings.[21] These guidelines became the foundation for subsequent refinement of the utilization of nurse practitioners as specified in the AMEDD's Ambulatory Patient Care Program.

Overall, the Army's nurse practitioner program has four key objectives. The first objective is to increase the availability of health care services by expanding the scope of nursing practice to include selected medical functions.

The second objective is to ensure safe nursing practice by establishing standards and roles for these nurses.

The third objective is to facilitate the growth of Army Nurse Corps officers through appropriate career patterns.

The last objective is to assure maximum effectiveness of nursing manhours by utilizing non-nursing support personnel for non-nursing functions.[22]

Although all four objectives are important, the Army Nurse Corps strongly emphasizes the first objective.[23] In its commitment to increasing the availability of health care services, the Army Nurse Corps seeks to promote health of the Army population, decrease morbidity by early detection of disease, provide better management of patients with

chronic health problems, and increase the satisfaction of the military community.

To perform this objective, the nurse practitioner necessarily has an expanded scope of nursing practice. The Army Nurse Corps maintains that this scope must be three dimensional. The first dimension is to provide patient and family teaching and the continuity of care necessary to ensure that the patient and his family have sufficient health care knowledge to care for themselves when at home.

The second dimension is to assume medically delegated functions and responsibilities. These include taking a health history, performing physical examinations, managing uncomplicated minor illness patients, and monitoring chronic disease patients.

The last dimension is to increase participation in interdisciplinary planning for patients' health plans. This ensures that the efforts of each member of the health care team are complementary and ensures maximum efficiency of the Army's health care resources.[24]

The utilization of nurse practitioners within the Army Medical Department has been successful. Lieutenant General Charles C. Pixley, The Surgeon General, United States Army, specifically has affirmed the positive effect of nurse practitioners while the Army has been grappling with the severe physician shortage of the past several years. In the future, he envisions an even greater utilization of Army Nurse Corps officers prepared to practice in extended roles as nurse practitioners. Thus, it would appear that the future is bright for nurse practitioners within the Army Medical Department.[25]

Conditions Which Prompted the Study

While conducting a study of Moncrief Army Hospital's Central Troop Medical Clinic, the author was impressed by the large trainee patient workload being treated by a nurse practitioner. However, in the same clinic were physician assistants who were also treating trainees. While learning the different responsibilities of these two health care providers, the author realized that the nurse practitioner role was of immense value to the Army Medical Department. However, upon further discussion with nurses, physicians, and administrators assigned to a number of Army Medical Department hospitals and headquarters, it became evident that there might be inconsistency between the formal educational preparation and the actual utilization of nurse practitioners within Army Medical Department hospitals. In addition, this inconsistency possibly might be exacerbated by conflicting perceptions on the part of nurses, physicians, and patients as to what is and what should be the appropriate utilization of nurse practitioners. Preliminary interviews with members of Moncrief Army Hospital's staff suggested that these inconsistencies might exist at this hospital. The result might be that the hospital's nurse practitioners are not being appropriately utilized.

Given the Army Nurse Corps' concept of a nurse practitioner as well as the shortage of physicians and the heavy patient workload of Moncrief Army Hospital, it is imperative that the hospital's nurse practitioners be utilized in the most appropriate manner to maximize their efficacy, efficiency, and productivity.

Statement of the Problem

The problem is to determine whether the nurse practitioners

assigned to Moncrief Army Hospital, Fort Jackson, South Carolina, are being appropriately utilized and to recommend actions to ensure their appropriate utilization.

Objectives

The objectives of this study are to:

1. Analyze the current duties and perceptions of the nurse practitioners assigned to Moncrief Army Hospital.

2. Analyze the perceptions of physicians who work in the same specialties as the nurse practitioners at Moncrief Army Hospital.

3. Analyze the perceptions of the head nurses at Moncrief Army Hospital.

4. Analyze the perceptions of the patients who are being treated in one of the clinics at Moncrief Army Hospital where nurse practitioners are assigned.

5. Compare the current nursing functions of Moncrief Army Hospital's nurse practitioners with the nursing functions which they were formally trained to perform.

6. Compare the current nursing functions of Moncrief Army Hospital's nurse practitioners with the nursing functions which Moncrief Army Hospital credentialled them to perform.

7. Analyze the current duties of the nurse practitioners assigned to Moncrief Army Hospital in light of the nurse practitioner policies of the Army Medical Department.

Criteria

To determine whether nurse practitioners are appropriately utilized

at Moncrief Army Hospital, the literature indicates that the following criteria are consistent with previous research and current policies.

1. Nurse practitioners are appropriately utilized if they are credentialled for 90 per cent of the skills which they were formally trained to perform.

2. Nurse practitioners are appropriately utilized if they are performing 90 per cent of the skills for which they were formally trained to perform.

3. Nurse practitioners are appropriately utilized if seven out of eight hours of their duty day, i.e., 88 per cent of the day, are involved in direct or related patient care activities.

4. Nurse practitioners are appropriately utilized if 85 per cent of the nurse practitioners are seeing their patients for approximately thirty minutes each.

5. Nurse practitioners are appropriately utilized if 90 per cent of their daily workload consists of twelve to twenty patients.

6. Nurse practitioners are appropriately utilized if less than one hour per day is involved in administrative activities.

7. Nurse practitioners are appropriately utilized if 85 per cent of the nurse practitioners believe they are being appropriately utilized.

8. Nurse practitioners are appropriately utilized if 85 per cent of the physicians accept the nurse practitioners.

9. Nurse practitioners are appropriately utilized if 85 per cent of the physicians perceive the nurse practitioner as more than a technician who extends the services of the physician.

10. Nurse practitioners are appropriately utilized if 85 per cent

of the physicians rely on the judgment of nurse practitioners within their designated functions.

11. Nurse practitioners are appropriately utilized if 85 per cent of the physicians are satisfied with the nurse practitioners' utilization in their clinics.

12. Nurse practitioners are appropriately utilized if 85 per cent of the head nurses understand and accept the role of the nurse practitioners.

13. Nurse practitioners are appropriately utilized if 75 per cent of the patients would accept care provided by a nurse practitioner.

14. Nurse practitioners are appropriately utilized if 75 per cent of the patients are aware of 75 per cent of the skills possessed by nurse practitioners.

Limitations

Limitations which influenced this study were:

1. Seven nurse practitioners were available to be evaluated. Although this is a small number of personnel to study, they comprised the actual total strength of the nurse practitioners at Moncrief Army Hospital. All seven responded to the nurse practitioner questionnaire.

2. Three hundred patients were to be provided questionnaires; however, only 286 patients were actually provided questionnaires. Of these, 279 patients completed and returned the questionnaire. Due to incomplete responses, a total of 256 questionnaires were actually evaluated. This sample size was deemed sufficient to reflect accurate patient perceptions of the nurse practitioner. The number of questionnaires was necessarily limited to enable manual manipulation and evaluation of responses.

3. Thirteen physicians completed and returned the questionnaire. These physicians were the entire staff of the pediatric and internal medicine services but one less than the complete obstetrics and gynecology service.

4. All head nurses were provided questionnaires; however, only nine of the potential eleven head nurses actually completed and returned the questionnaire.

5. Questionnaires for the patients were distributed randomly within the three specialty clinics in which nurse practitioners are employed. It cannot be automatically assumed that a representative demographic sample of Moncrief Army Hospital's patient population was obtained. Nevertheless, the relatively large sample size and the randomization optimized the possibility of a representative sample.

6. The questionnaires were provided only once. Follow-up surveys at regular intervals might have provided additional reliability to the study.

7. Because of the relatively small number of nurse practitioners, physicians, and head nurses at Moncrief Army Hospital, personalities may have influenced the replies to the questionnaire.

8. Given the small aggregate number of health care providers available to be surveyed, it was not feasible to utilize control groups.

9. The survey did not survey nurse practitioners or other health care providers at other military or civilian medical treatment facilities. This was due primarily to the necessity of each facility to tailor nurse practitioner utilization to the local health care requirements.

Accordingly. comparing Moncrief Army Hospital's nurse practitioner utilization with another medical treatment facility was considered inappropriate for the purposes of this study.

Assumptions

Assumptions which were made in this study were:

1. The physician shortages at Moncrief Army Hospital will continue.

2. Nurse practitioners will continue to be utilized at Moncrief Army Hospital.

3. Nurse practitioners are qualified to perform the tasks for which they were formally trained at the Army Medical Department's nurse practitioner programs.

4. Nurse practitioners are qualified to perform the tasks for which they are credentialled at Moncrief Army Hospital.

5. Patient workloads will continue at present levels.

6. The organizational and professional relationships of nurse practitioners at Moncrief Army Hospital will remain unchanged.

Definitions

The following three definitions are essential to understand. It should be noted that whenever the term nurse practitioner is discussed in a military context in this study, the Army Nurse Practitioner definition is applicable. In other discussions, the American Nurses' Association definition is applicable.

Army Nurse Practitioner. An Army Nurse Corps officer who has been prepared to function in expanded roles and has been recognized as a nurse practitioner by the Office of The Surgeon General. Nurse practitioners

are prepared for both inpatient and ambulatory care settings.[26]

American Nurses' Association Nurse Practitioner. A licensed professional nurse who provides direct care to individuals, families, and other groups in a variety of settings. The service provided by the nurse practitioner is aimed at the delivery of primary, acute, or chronic care. The nurse practitioner engages in independent decision making about the nursing care needs of clients and collaborates with other health professionals, such as physicians, social workers, and nutritionists, in making decisions about other health care needs. The nurse practitioner plans and institutes health care programs as a member of the health care team.[27]

Direct Supervision. The immediate surveillance and guidance which is provided by a physician.[28]

Literature Review

Since a large majority of the physician extender programs are affiliated with university medical centers, a number of health professionals are employed to teach and/or conduct research in these programs. Given the academic environment, it is not surprising that a significant amount of reports and studies has been published pertaining to these new health care providers. For example, between 1966 and 1975, approximately 400 articles were published analyzing nurse practitioners and/or physician assistants.[29]

Although the literature analyzes a wide spectrum of issues, emphasis is placed on the nurse practitioner's utilization and role, the quality of care they provide, and patient perceptions of nurse practitioners.

Physician utilization of nurse practitioners

Studies have indicated that physician ability and willingness are

key elements in whether nurse practitioners are utilized and which tasks the nurse practitioners are delegated to perform. The physician is able to employ nurse practitioners only when the nurse practitioner can perform technical tasks without a reduction in the quality of patient care. The incentive to employ nurse practitioners was highlighted by one study which indicated that physician productivity was directly proportional to the amount of patient care tasks which were delegated to nurse practitioners in settings of all sizes.[30] Victor Fuchs is an advocate of these findings. He believes that most tasks performed at the present time by physicians could be performed by physician extenders who work under the direct supervision of physicians.[31] Stimson and Charles go further by asserting that appropriately trained physician extenders, to include nurse practitioners, could perform all the technical functions of primary care.[32] However, emphasizing their nursing education role, nurse practitioners believe they should devote approximately thirty minutes to a patient.[33] Similarly, if a nurse practitioner is seeing thirty to forty patients per day, it is probable that the nurse practitioner is being used as a physician assistant.[34]

A separate issue is whether physicians are willing to utilize nurse practitioners. Forty per cent of the physicians in one study were willing to employ any physician extender; similarly, another study indicated that only 34 per cent of the physicians would employ a nurse practitioner. Generally speaking, the physicians were much less willing to delegate tasks which involved decision-making or case management than they were in delegating supportive tasks such as taking a history or providing education and counseling. Studies have shown that this conflicting degree of

physician willingness to delegate tasks ranged from 20 to 90 per cent depending on the tasks in issue.[35]

One detailed study indicated that only 33 per cent of the physicians were willing to utilize a nurse practitioner.[36] The study identified several reasons. One reason involved the desire to retain medicine's social status quo. The physicians were comfortable with the traditional roles and relationships between the physician and nurse and felt that the nurse practitioner concept threatened that status quo. The physician has traditionally been the dominant player in the health care setting while the nurse has traditionally played a dependent role. The traditional role of the physician has been determined by sex, age, social class, and education. Typically, the physician has been an older male who was a member of a higher socioeconomic class. He also theoretically possessed superior knowledge which society rewarded by granting him higher prestige and pecuniary awards. In stark contrast, the formal nurse practitioner profession is less than twenty years old and typically consists of young females from lower socioeconomic levels. The nurse practitioner must cope with society's male domination which is especially prevalent in the health care field.[37] The nurse practitioner movement has sought to erase the dependent characteristic of the nurse role by assuming more independence of action. The result has understandably been a perception by some physicians that the nurse practitioner is a new competitor vis-à-vis a traditional subordinate in the provision of health care.[38]

The same study also found that 61 per cent of the physicians would delegate some functions to a nurse practitioner.[39] The most common functions to be delegated were taking a routine health history, providing education

and counseling, and managing a case in accordance with an approved protocol. In contrast, the functions less seldom delegated were performing an initial physical examination, prescribing a therapeutic regimen, and determining abnormal findings. The common perception determining whether a function would be delegated was that the nurse practitioner's role was as a technician and not as a colleague who worked with a degree of independence.

In addition, the study indicated that the age of the physician was a significant determinant. In general, since the younger physicians were more willing to adopt various innovations, they were also more willing to utilize nurse practitioners. In fact, a similar study found that the number of years since graduation from medical school was the strongest predictor of whether a physician would hire a nurse practitioner, i.e., the younger the physician, the greater the likelihood of hiring a nurse practitioner.[40]

The type of physician setting was also found to influence whether a physician would utilize a nurse practitioner. Physicians in group practice and in institutions were more willing to employ nurse practitioners. Solo practitioners were found to be more conservative toward innovations and, therefore, were less willing to utilize nurse practitioners. In addition to the innovation explanation, it was also found that solo practitioners simply did not have the economies of scale to justify hiring a nurse practitioner. Conversely, it was suggested that physicians employed in large institutions were more receptive to nurse practitioners because they might not be required to justify the nurse practitioner on a cost-benefit basis.[41]

Another study found that physicians were more willing to utilize

nurse practitioners if they had had prior experience with nurse practitioners. It was shown that resistance to nurse practitioners fades as experience is gained. Specifically, physicians who had had experience with midwives during graduate medical education or as a practicing physician were more receptive to utilizing nurse practitioners than physicians without prior experience.[42]

Another study supported the assertion that physicians were more desirous of employing nurse practitioners if the physicians worked in direct contact with the nurse practitioners. The study evaluated an internal medicine house staff for twenty-one months. It found that the more contact residents had with nurse practitioners, the more favorable was the attitude of the physicians toward hiring nurse practitioners when they subsequently began a practice.[43]

One research effort also found that physicians utilized nurse practitioners more readily when the physicians understood the nurse practitioner's role. At the beginning of the study, 70 per cent of the initial patient encounters were seen by physicians. However, at the end of the three year test, only 38 per cent of the initial patient encounters were still seen by physicians. Equally impressive was the increase in the range of treatment provided by the nurse practitioners. By the end of the study, the nurse practitioners were treating injuries as well as taking health histories. They were also providing more treatment of acute illnesses. Interestingly, the physicians became more involved in treating chronic conditions.[44] However, in general, it has been found that nurse practitioners were utilized more for chronic illness and preventive medicine health care than for acute illness.[45]

A sociologist has constructed a model to explain some of the research findings. The model represents the inherent conflict within the health care arena.[46] Time, money, information, and status are finite and limited resources. Therefore, there is competition for these resources with power going to the group who can control them. The nurse practitioner has disrupted the status quo of the control of these limited resources because the nurse practitioner is seeking more of the resources. The competition arises because some other group will necessarily have to relinquish control of some of the finite resources to the nurse practitioner. Primarily, it is some of the resources controlled by the physician which the nurse practitioner strives to control.

The nurse practitioner is attacking the physician's power base by going directly to the patient. In the past, the physician-patient relationship has been unassailable. The physician's power, i.e., medical authority, has derived from his knowledge base.[47] Thus, in exchange for information pertaining to his condition, the patient has provided the physician trust, money, esteem, and status. The physician feels himself as being personally responsible for the successful outcome of the patient's illness. Thus, he has trouble trusting the nurse practitioner's history and physical findings.[48]

The nurse practitioner has circumvented the physician-patient relationship by providing medical information directly to the patient. Because the information is going to the patient without his input, the physician perceives a loss of authority. Essentially, the patient has become less dependent on the physician and, therefore, the physician has lost some of his traditional power base.

However, the model suggests that the physician might perceive the nurse practitioner as a valuable asset and not as a threat. For example, studies have shown that the number of patients treated increases with the addition of nurse practitioners. This generates more revenue and increases the pecuniary reward. One study found that adding two family nurse practitioners to what appeared to be an already saturated practice resulted in a 41 per cent increase in patient load after two years.[49] In addition, the nurse practitioner enables the physician to concentrate on more complex and stimulating cases because the uncomplicated cases are managed by the nurse practitioner. Finally, the physician's practice may actually increase in prestige in the eyes of more sophisticated patients who perceive the physician as employing state of the art techniques by utilizing a nurse practitioner.[50]

Caution must be exercised when studying how physicians utilize and perceive nurse practitioners. For example, a 1972 study found a wide divergence between what physicians were professing and what they were practicing. While they were urging the delegation of tasks to nurse practitioners, in reality they were not utilizing their nurse practitioners for any functions outside the role of the traditional nurse. Thus, instead of performing in an expanded nursing role, the nurse practitioners were performing traditional administrative and clerical tasks.[51] Other studies traced this discrepancy to the physician's general conservatism, economic self-interest, and reluctance to delegate responsibility.[52]

Another reason for this wide divergency is the physicians' lack of knowledge of what skills the nurse practitioners possess. Not only do the physicians not know the nurse practitioners' skill level, but the

physicians are not trained to know how to integrate the nurse practitioners' skills into their practices. One study indicated that the physicians did not know how to integrate the nurse practitioners and consequently felt less effective and satisfied when the nurse practitioners were given more responsibility. Essentially, the physicians felt that they had lost control of the patient. The study concluded that this feeling can be eliminated by training the physicians to maintain continuity with their patients while still utilizing the skills of the nurse practitioner.[53]

Role of nurse practitioners

The nurse practitioner role is firmly dedicated to the traditional nursing philosophy of total patient care. As a result, the nurse practitioner is committed to extensive verbal interactions with patients. Studies have demonstrated that nurse practitioners emphasize patient education, counseling, home care, and other health promotion activities. Health maintenance and health assessment are also major areas of interest. These traditional nursing functions are utilized in the nurse practitioners' expanded role of managing minor acute illnesses and stable chronic conditions. In comparison with the traditional nursing role, nurse practitioners are found to spend 50 per cent more time in clinical activities and 50 per cent less time in clerical and routine administrative activities.[54]

One study analyzed the work routine of nurse practitioners. It found that 70 per cent of the nurse practitioners' patients were not being seen by a physician during the same visit. Although approximately one hour of the day was spent in administrative activities, the majority of the day was spent in direct patient care activities. Most of these activities were physical examinations and health histories. Less frequent activities

were routine laboratory work, cultures, Pap smears, and breast examinations. Very little of their activities involved technical, specialized health care tasks. In fact, there was a consistent theme of preventive health care throughout their activities.[55] Another study found that 75 per cent of a group of technical skills were not agreeable to nurse practitioners as role expectations.[56]

The patient workload demographics are varied. One study found that 52 per cent of the nurse practitioners' patients were under thirty years old while 16 per cent were over sixty-five years old. Females accounted for 65 per cent of the workload. Sixty-seven per cent of the patients were receiving the majority of their care from nurse practitioners while 38 per cent of the patients' families were receiving the majority of their care from nurse practitioners. Seventy per cent of the patients had been previously treated by nurse practitioners. These figures reflect that the nurse practitioners were providing continuity of care to their patients. Interestingly, 83.1 per cent of the nurse practitioner patients were self-referrals. Lastly, the nurse practitioners spent about twenty minutes per patient.[57]

Another study indicated that nurse practitioners were very productive. In one pediatric service, the nurse practitioner by herself managed about 75 per cent of the patients treated in the office. In another practice, the nurse practitioner treated 82 per cent of the patients and only required consultation with the physician in 11 per cent of the cases.[58]

Role conflict of nurse practitioners

Nurse practitioners experience a number of role conflicts. The first is an identity crisis. They must resolve whether they are simply a

physician extender or an independent health care provider. This identity crisis extends to their co-workers. Fellow nurses may no longer perceive them as nurses. Concurrently, physicians will not accept them as physicians.[59]

The second conflict is a professional crisis. They must reconcile their newly acquired duties to assess and manage patients with their traditional nursing duties to comfort, support, and help. Studies have shown that during their nurse practitioner programs and up to eight to twelve months afterwards, a number of nurse practitioners perceive themselves in a medical vis-à-vis nursing role. However, the typically successful nurse practitioner is able to resolve the conflict and develops a balanced role between nursing and medicine.[60]

In addition to identity and professional crisis, nurse practitioners are confronted with an autonomy crisis. Traditionally, nurses did not possess a high degree of autonomy. However, nurse practitioners theoretically require a high degree of autonomy. In order to perform their duties, they must function with more independence and with more initiative than traditional nurses. Essentially, nurse practitioners must develop and possess a sense of self which differentiates them from others.[61]

This sense of self creates a role strain with physicians and other nurses. Their duties require autonomy and confidence in order to assume responsibility for patient care. This assumption of responsibility can result in ambiguities, misunderstandings, and uncertainties with physicians and nurses. Understandably, feelings of threat and insecurity can be aroused by the arrival of nurse practitioners.

Nursing profession's integration of nurse practitioners

At least two advantages have been identified for the nursing profession as the result of the development of the nurse practitioner concept. First, because of the higher degree of autonomy required by the nurse practitioner, there has been an increase in the entire profession's status and power. Second, this same autonomy has enabled the profession to develop and improve its nursing knowledge. As a result, new modalities, methodologies, and procedures are being tested by nurse practitioners independent of other professions. These results will continue to increase the scientific base of nursing knowledge.[62]

However, disadvantages also exist. First, the profession is internally split over the issue of whether nursing should expand its role to the degree sought by nurse practitioners. Second, the profession is being attacked by external forces who argue that nurses are attempting to usurp the duties of physicians and are competing directly with physicians for patients. This is most evident in specialties such as pediatrics where the physician and the nurse practitioner are both trained to treat similar illnesses.[63] In response, the nursing profession asserts that the nurse practitioner is not a substitute for the physician but adds another dimension to the patient's total health care. In essence, the profession perceives the nurse practitioner as performing a role which complements vis-à-vis substitutes for the physician's responsibilities.[64] It points to the fact that in most states the nurse practitioner is governed by the nurse practice act and not the medical practice act. This, if for no other reason, the nurse practitioner legally is not authorized to perform as a mini-physician.[65]

Quality of care provided by nurse practitioners

A number of studies have analyzed the issue of the quality of care provided by nurse practitioners. In one study, process audits found that nurse practitioners concurred with physicians in 80.6 per cent of the cases. The majority of discrepancies were cases where the nurse practitioners recorded positive findings but the physician did not.[66]

Other studies obtained similar results. One study had an 86 per cent level of concurrence with less than 1 per cent being a serious omission. Another study of pediatric patients found a 91 per cent concurrence level. Kaiser-Permanente conducted a study of 1,152 preschool children and found that the nurse practitioners were more likely to report orthopedic and dermatological findings on well-child physical examinations than were the pediatricians.[67] Finally, a study utilizing outcome criteria determined that a diabetic clinic run by nurse practitioners performed as well as a diabetic clinic run by physicians. In addition, it was found that the nurse practitioner clinic actually provided more patient education and better continuity of care. The nurse practitioner clinic also experienced a decrease in the broken appointment rate.[68]

Patient perceptions of nurse practitioners

Studies of patients have revealed a number of positive and negative perceptions toward nurse practitioners. One study revealed that regardless of age or illness, the patients accepted the nurse practitioner. It was clear that the nurse practitioner care was patient-centered, personal in nature, and lacking the production line syndrome. The patients accepted the nurse practitioner because the care was perceived as high quality and humanistic. This perception of quality care was independently supported

by a peer review mechanism.[69]

Another study analyzed the perceptions of a metropolitan population regarding care provided by nurse practitioners. This study found that only 41 per cent of the sample had heard the term "nurse practitioner" while 95 per cent had heard the term "registered nurse." However, only 4.1 per cent of the sample claimed they had ever been treated by a nurse practitioner (or a physician assistant). The majority of the sample indicated that they would accept preliminary examinations, follow-up care, and routine care to well babies, pregnant mothers, and hypertensive patients. In contrast, few would accept emergency care from a nurse practitioner. Essentially, the study revealed that the public will accept the delegation of medical tasks to a nurse practitioner as long as the nurse practitioner remains an assistant to a physician. The study suggests that the public is receptive to nurse practitioners but must be taught who nurse practitioners are and what health care tasks they can perform.[70]

A number of other studies confirmed this suggestion. Consistently, nurse practitioners were most acceptable to patients when they knew the nurse practitioner was subordinate to a physician and that the patient could see the physician if necessary. The patients were more willing to be treated by a nurse practitioner for health maintenance and illness surveillance. A physician was preferred for more serious illnesses.[71] Another study indicated that patients did not accept 20 per cent of the decision-making abilities possessed by nurse practitioners.[72]

Patient acceptance was also a function of other factors. It was found that upper class patients were more accepting of a nurse practitioner than were middle or lower class patients. Also, patients who had

previously been treated by a nurse practitioner were more willing to return to the nurse practitioner. In fact, one study indicated a significant preference shift towards nurse practitioners after one year of treatment by nurse practitioners.[73]

Conclusion

In conclusion, studies have shown that nurse practitioners and traditional health care providers have been able to adjust to the new relationships required by the addition of a new health care provider. Positive feelings exist and job satisfaction has been sustained. Nurse practitioners are providing good quality patient care while increasing productivity at a lower cost. And finally, patients have been found to be satisfied with the care provided by nurse practitioners.

Research Methodology

The following steps were taken as part of the research design:

Collection of data

The instructional objectives of the U.S. Army Academy of Health Sciences' Adult Medical-Surgical Nurse Practitioner Course, the Obstetric and Gynecology Nurse Practitioner Course, and the Pediatric Nurse Practitioner Course were obtained (see Appendices A, B, and C, respectively).

The Programs of Instruction of the U.S. Army Academy of Health Sciences Adult Medical-Surgical Nurse Practitioner Course and the Obstetric and Gynecology Nurse Practitioner Course were obtained (see Selected Bibliography).

Pertinent Department of the Army, Army Medical Department and the United States Army Health Services Command regulations and policies were obtained (see Selected Bibliography).

Credentials pertaining to all seven nurse practitioners assigned to Moncrief Army Hospital were obtained (see Appendices D, E, and F for sample credential forms of adult medical-surgical, obstetric and gynecology, and pediatric nurse practitioners, respectively).

Questionnaires were given to all seven nurse practitioners (see Appendix G) and fourteen physicians assigned to the obstetrics and gynecology, internal medicine, and pediatric clinics (see Appendix H). The questionnaires within each group differed only in the question pertaining to the skills of that specialty.

Identical questionnaires were given to all eleven head nurses of Moncrief Army Hospital's wards (See Appendix I). Head nurses were selected to reflect perceptions of non-nurse practitioners. The head nurses represent a mature, experienced group of registered nurses who, by virtue of their position and experience, would be able to provide meaningful responses.

Questionnaires were to be given to one hundred patients in each clinic where nurse practitioners are utilized (see Appendix J). The questionnaires differed only in the question pertaining to the skills of that specialty. The questionnaires were actually given to the clinic's receptionist with instructions to give one questionnaire to each patient until the one hundred questionnaires were exhausted.

A comprehensive review of the literature was conducted to verify the potential existence of the problem and the appropriateness of the study's criteria as well as the questions to be asked the patients and health care providers. (See Selected Bibliography.)

Recording of data

Questionnaires were utilized to record the perceptions of nurse practitioners by physicians, patients, head nurses, and nurse practitioners.

Evaluation of data

Data from all questionnaires were manually tabulated and presented in narrative form.

Responses from the questionnaires of the nurse practitioners, physicians, head nurses, and patients were compared to the study's criteria in order to determine whether nurse practitioners are being appropriately utilized.

Responses from the questionnaires were compared with the literature to determine the study's consistency with similarly conducted research.

Footnotes

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[4]Eric L. Herzog, "The Underutilization of Nurse Practitioners in Ambulatory Care," Nurse Practitioner 2 (September/October 1976): 26.

[5]Ibid.

[6]Darlene Jelinek, "The Longitudinal Study of Nurse Practitioners: Report of Phase II," Nurse Practitioner 3 (January/February 1978): 17.

[7]Ibid.

[8]Alfred M. Sadler, Jr., "The New Health Practitioner in Primary Care," The PA Journal 4 (Summer 1974): 36.

[9]David Lawrence, "Physician Assistants and Nurse Practitioners: Their Impact on Health Care Access, Costs, and Quality," Health and Medical Care Services Review 1 (March/April 1978): 3.

[10]Doris M. Storms and John G. Fox, "The Public's View of Physicians' Assistants and Nurse Practitioners," Medical Care 17 (May 1979): 526.

[11]Sadler, P. 36.

[12]Ibid.

[13]Lawrence, p. 3.

[14]Vivian Hedrich, "Educating for the Expanded Role," Nurse Practitioner 3 (January/February 1978): 13.

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[18]Sadye T. Travers, "Army Nursing - Contemporary Practice Program," Briefing presented at the Chief Nurses' Conference of the U.S. Army Nurse Corps (25-28 April 1972): 1.

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[20]Richard G. Jensen, "Role of the Nurse Practitioner in Ambulatory Care," Briefing presented as part of the Primary Health Care Panel, Fourth Ambulatory Care Conference, Washington, D.C. (September 1978): 2.

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[23]Ibid.

[24]Ibid., p. 3.

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[26]U.S. Department of the Army, "Nurse Practitioner in the Ambulatory Patient Care Setting," APC Model #8: HSPA-A (January 1980): 1.

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[28]Kenneth G. Buhmeyer, Arthur C. Hutson, and S. Margaret Davies, "Role of Medex Physician Extenders," The PA Journal 6 (Summer 1976): 86.

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[30]Myron D. Fottler, "Physician Attitudes Toward Physician Extenders: A Comparison of Nurse Practitioners and Physician Assistants," Medical Care 17 (May 1979): 536.

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[37]Paul A. Repicky, Robert C. Mendenhall, and Richard E. Neville, "Professional Activities of Nurse Practitioners in Adult Ambulatory Care Settings," Nurse Practitioner 5 (March/April 1980): 27.

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[39]Ibid., p. 544.

[40]Morris Weinberger, James Y. Greene, and Joseph J. Mamlin, "Changing House Staff Attitudes Toward Nurse Practitioners during Their Residency Training," American Journal of Public Health 70 (November 1980): 1204.

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[42]Ibid., p. 546.

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[46]Marilyn Little, "Physicians' Attitudes Toward Employment of Nurse Practitioners," Nurse Practitioner 3 (July/August 1978): 28.

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[51]Herzog, p. 26.

[52]Little, p. 27.

[53]Herzog, p. 27.

[54]Repicky, Mendenhall, and Neville, p. 27.

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[56]Janet R. Southby, "Primary Care Nurse Practitioners Within the Army Health Care System: Expectations and Perceptions of the Role," Military Medicine 145 (October 1980): 664.

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[61]Mauksch, p. 35.

[62]Christy Z. Dachelet and Judith A. Sullivan, "Autonomy in Practice," Nurse Practitioner 4 (March/April 1979): 18.

[63]Fottler, p. 539.

[64]Dachelet and Sullivan, p. 18.

[65]Fottler, p. 537.

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[68]Ibid.

[69]Mary Ann Draye and Lorrie A. Stetson, "The Nurse Practitioner as an Economic Reality," Nurse Practitioner 1 (November/December 1975): 63.

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[73]Lawrence, p. 6.

II. DISCUSSION

To determine whether nurse practitioners assigned to Moncrief Army Hospital are being appropriately utilized, perceptions of Moncrief Army Hospital's nurse practitioners and head nurses, as well as selected physicians and patients, were obtained. These perceptions were then applied to the study's criteria listed supra. In addition, to determine the consistency of the respondents' replies vis-à-vis previous research, their personal data and perceptions were evaluated in light of the literature review.

Current Utilization of Nurse Practitioners

There are seven nurse practitioners currently assigned to Moncrief Army Hospital. Three are utilized in the pediatric clinic, two in the internal medicine clinic, and two in the obstetrics and gynecology clinic.

Pediatric nurse practitioners

There are currently three pediatric nurse practitioners in the Pediatric Clinic. This is one more pediatric nurse practitioner than is authorized; however, this is a temporary situation because the clinic usually has only two nurse practitioners.

Each nurse practitioner averages 250 patient visits per month. The majority of these visits are routine appointments.

The pediatric nurse practitioners treat infants, children, and adolescents. They provide acute, chronic and health maintenance primary care. This care includes minor illness, physical examinations, enuresis, anemia,

asthma, child abuse follow-up, and failure to thrive. Additionally, the pediatric nurse practitioners manage Denver Developmental Screening and referrals to civilian agencies.

In the Well Baby Clinic, the pediatric nurse practitioners treat infants ranging in age from two weeks to eighteen months. The pediatric nurse practitioners provide counseling as well as physical examinations and routine immunizations. The pediatric nurse practitioners are responsible for screening records, supervising documentation, and storing the vaccine.

The adolescent population includes patients up to age nineteen and even to age twenty-one if the patient desires. These adolescents are seen primarily for acute minor illness and physical examinations.

In the inpatient setting, pediatric nurse practitioners perform physical examinations on uncomplicated vaginally delivered infants. They also teach postpartum mothers how to care and feed infants.

The pediatric nurse practitioners also perform the role of preceptors for students from the University of South Carolina. These students are in Family Nurse Practitioner or Nursing Graduate courses who perform their pediatric rotations at Moncrief Army Hospital.

The pediatric nurse practitioners perform additional duties outside direct patient care. They are utilized for weekend nursing supervisor on a rotating basis. They are active in Expectant Parent Classes which are held after normal duty hours on a quarterly basis. They teach unit and hospital level inservice educational programs on a wide spectrum of subjects. Similarly, they conduct a Prenatal Continuing Education program in coordination with a local medical center. They also prepare handouts on such topics as infant care, breastfeeding, and available civilian agency

resources.

A pediatrician is required to review one day's outpatient records per month. In addition, peer review is performed twice per month and includes nurse practitioner records from all clinic settings.

The pediatric nurse practitioners meet weekly for inservices, discussions of problem areas, and peer review. They also participate with the pediatricians in pediatric case management discussions which are conducted four days per week.[1]

Adult ambulatory care nurse practitioners

There are currently two adult ambulatory care nurse practitioners in the Internal Medicine Clinic.

Each nurse practitioner averages 375 patient visits per month. In 1978, each nurse practitioner averaged a caseload of 1200 patients; however, this had to be reduced because it was physically impossible to see these patients every three to six months as required by their chronic conditions. Currently, there are 220 patients who are seeking return visits. Unfortunately, the nurse practitioners simply do not have the time for them. In fact, no new patients have been seen for the last two years.

Approximately 60 per cent of the nurse practitioners' duties involves providing primary health care to patients with chronic diseases. Another 2 per cent of the duties is instructing inpatients who have diabetes and/or hypertension. Approximately 15 per cent of the nurse practitioners' duties is involved in group teaching of patients with diabetes.

The remainder of the nurse practitioners' duties are not direct patient care activities. The nurse practitioners maintain all records and

reports pertaining to the management of their patients. A peer review system is utilized to ensure high quality patient care. Educational endeavors are extensive. The nurse practitioners attend medical conferences as well as nursing programs pertaining to technical proficiency, effective communications and performing assessments and discharge planning. The nurse practitioners also attend Department of Nursing meetings to include the Morning Report. They provide consultative and continuing health education programs to the hospital staff. These programs are given at both unit level and hospital level. Lastly, the nurse practitioners attend the Department of Medicine meetings.[2]

Obstetrics and Gynecology nurse practitioners

There are currently two obstetrics and gynecology nurse practitioners in the Obstetrics and Gynecology Clinic.

One nurse practitioner works full time in the Central Troop Medical Clinic (CTMC) treating active duty females (the large majority are young basic trainees). The treatment includes essentially screening and counseling as well as primary care. This nurse practitioner averages 900 patient visits per month.

The other nurse practitioner provides care to active duty and dependent females within the hospital setting and includes both inpatients and outpatients. This nurse practitioner also assists in the CTMC by performing approximately ninety gynecology referral physical examinations per month.

Both nurse practitioners perform a wide spectrum of primary care. This includes routine screening examinations, gynecology physical examinations, Pap smears, minor gynecology problems, and Cryo surgery. Family

planning is also a large function and includes contraceptive measures such as prescribing and fitting diaphragms, IUD insertion, and birth control pills.

Educational activities include prophylactic health teaching, provision of health care and counseling to antepartum and postpartum women and their families, and instruction of inservice programs to nurses and other groups inside and outside the hospital.

The nurse practitioners are constrained in their participation in activities which are not direct patient care oriented. Accordingly, limited time is expended on teaching patients in such subjects as parenthood and human sexuality. Also, the nurse practitioners are constrained from attending continuing education conferences and workshops as well as peer review. The nurse practitioners are also required to perform clinical and ancillary duties because of shortages in support personnel.[3]

Nurse Practitioner Perceptions

All seven of the available nurse practitioners responded completely to the questionnaire.

Personal data.

The age of the respondents ranged from twenty-six to thirty-one. Two were twenty-six, two were twenty-seven, and one each was twenty-eight, thirty, and thirty-one. All were captains with an average of 5.9 years in the Army Nurse Corps. However, the range was from 3.5 to eleven years. The respondents averaged 3.6 years of nursing before becoming a nurse practitioner and averaged 3.3 years as a nurse practitioner. Six of the officers were female and three of the officers were married. Three

officers were taking educational courses; however, none were health care related.

Perceptions of nurse practitioners

The nurse practitioners were asked twenty-one questions which reflected how they perceived themselves as being utilized at Moncrief Army Hospital.

The nurse practitioners were evenly distributed on why they became a nurse practitioner. Three cited the most important reason as being the challenge of the work while one each cited frustration of former work, more independence, greater influence on patient care, and additional learning opportunities. No nurse practitioner listed increased status, increased promotion potential, or more collaboration with physicians as any reason at all for becoming a nurse practitioner.

Six of the seven nurse practitioners perceived themselves as being satisfactorily accepted by all staff elements of Moncrief Army Hospital. The other nurse practitioner believed that nurse practitioners were not well accepted by any physicians or nurses. Six of the seven did not know how AMOSISTs accepted them because of lack of interactions.

Five of the nurse practitioners believed they were provided adequate professional support personnel and supplies. However, six did not believe they were provided adequate administrative support personnel nor adequate physical facilities.

The nurse practitioners averaged 6.3 hours per day in direct patient care activities. Another thirty minutes each was spent in consultations with physicians and other-than-physicians. Similarly, thirty minutes was spent in administrative matters and one hour was spent in professional/

educational matters.

Three nurse practitioners cited the lack of experience as the reason hindering them from contributing as much as they could. One each cited lack of adequate training in the nurse practitioner course, resistance of clinic's physicians, resistance of other physicians, and lack of direct physician preceptor support. No nurse practitioner cited resistance of nursing supervisors or resistance of any patient as a reason hindering them at all.

Five of the nurse practitioners rated their job as satisfying, one rated it as very satisfying, and one rated it as dissatisfying.

Three of the nurse practitioners cited their greater influence on patient care as the most satisfying aspect of being a nurse practitioner. One each cited the challenge of the work, more collaboration with physicians, additional learning opportunities, and satisfying patient relationships.

The nurse practitioners were diverse in their frequency of interaction with physicians. Three nurse practitioners had their records reviewed or their patients discussed with a physician weekly, while one each had daily, monthly, and biweekly review. However, one claimed his/her records or patients were never reviewed/discussed.

The nurse practitioners spent between fifteen and thirty minutes with their patients which was also their preferred time period. They saw an average of fifteen patients per day but preferred to see an average of fourteen patients per day.

Although all seven nurse practitioners desired their next assignment to be as a nurse practitioner, only three wanted to be utilized as a nurse practitioner throughout their Army career. However, another three were

undecided as to their future utilization.

All seven nurse practitioners performed duties, e.g. weekend supervisor, for non-nurse practitioners. However, five nurse practitioners did not feel they should nave performed these substitute duties.

None of the nurse practitioners felt that nurse practitioners and physician assistants were intended to fill the same role.

The nurse practitioners were overwhelmingly consistent in their appraisal of their skill levels. Of the aggregate fifty-eight skills involved in the three specialties, only two skills were identified by the nurse practitioners as not being trained by the nurse practitioner course, i.e., perform Pap smears and perform well child physical for preschool, athletics, overseas, and adoption. However, in fact, Pap smears and physical examinations are learning objectives of the nurse practitioner programs. These discrepancies could have been the result of individual experiences during the nurse practitioner program or a modification of a particular nurse practitioner program while the nurse practitioner was a student.

All the nurse practitioners indicated that they were authorized to perform all the skills for which they were trained. The only skill which one nurse practitioner did not feel competent to perform was a Pap smear. This is consistent with the paragraph above and suggests that this response was a unique situation.

In general, five of the nurse practitioners indicated that they felt they were being appropriately utilized. One of the other two felt that too much time was involved in non-direct patient care activities. The other nurse practitioner felt that his/her role could be broadened to include

wellness vis-à-vis illness teaching.

Application of criteria

Seven criteria were established in this study pertaining to nurse practitioner perceptions of whether they are appropriately utilized at Moncrief Army Hospital.

The first criterion is that nurse practitioners are appropriately utilized if they were credentialled for 90 per cent of the skills which they were formally trained to perform. As indicated supra, this criterion is met. All seven nurse practitioners were credentialled for all the skills with the exception of one nurse practitioner who did not feel competent to perform one skill.

The second criterion is that nurse practitioners are appropriately utilized if they were performing 90 per cent of the skills for which they were formally trained to perform. This criterion is met by the medicine and pediatric nurse practitioners. However, it is not met by the obstetrics and gynecology nurse practitioners. These nurse practitioners were not performing four skills, i.e., monitor patients during normal labor, monitor labor induced by regulated oxytoxic infusion, monitor labor for patients with regional anesthesia, and assist at delivery. In addition, one of the two nurse practitioners did not perform five other skills, i.e., normal postpartum inpatient examination, normal postpartum discharge, obstetrics history, normal newborn care, and preoperative preparation.

The third criterion is that nurse practitioners are appropriately utilized if seven out of eight hours of their duty day, i.e., 88 per cent of the day, were involved in direct or related patient care activities. This criterion is also met. Although only 6.3 hours were spent directly with

patients, another one hour was spent in consultations. These consultations were necessarily part of the nurse practitioner's role and impacted directly on his/her ability to provide optimal health care. Thus, the nurse practitioners spent over seven out of eight hours, i.e., 88 per cent of their duty day, in patient care activities.

The fourth criterion is that nurse practitioners are appropriately utilized if 85 per cent of the nurse practitioners saw their patients for approximately thirty minutes each. This criterion is not met. Four of the nurse practitioners, i.e. 57 per cent, spent approximately fifteen minutes with each patient. The other three spent approximately thirty minutes per patient. However, it is noted that no nurse practitioner indicated on the questionnaire that he/she was limited to a particular time period per patient. Thus, it is possible that the four nurse practitioners were treating patients who did not require thirty minutes. Nevertheless, this is an area for further research and evaluation.

The fifth criterion is that nurse practitioners are appropriately utilized if 90 per cent of their daily workload consisted of twelve to twenty patients. This criterion is met. Six nurse practitioners saw an average of fifteen patients per day. However, the other nurse practitioner was assigned to a basic trainee health clinic where thirty-five to fifty patients were seen daily. This clinic is necessary because Fort Jackson, as a primary site for basic training, has a large volume of female trainees who require medical attention which a nurse practitioner can provide.

The sixth criterion is that nurse practitioners are appropriately utilized if less than one hour per day was involved in administrative activities. This criterion is met. All seven nurse practitioners indicated that administrative activities consumed an hour or less. In fact, five of

the nurse practitioners indicated that thirty minutes or less were involved in administrative activities.

The seventh criterion is that nurse practitioners are appropriately utilized if 85 per cent of the nurse practitioners believed they were being appropriately utilized. This criterion is not met. As discussed supra, two of the seven nurse practitioners, i.e., 29 per cent, felt they were not being appropriately utilized.

In summary, three of the seven criteria are not met. First, the obstetrics and gynecology nurse practitioners were not performing 90 per cent of the skills for which they were formally trained to perform. Second, less than 85 per cent of the nurse practitioners saw their patients for approximately thirty minutes each. Third, less than 85 per cent of the nurse practitioners believed they were being appropriately utilized.

Physician Perceptions

Thirteen physicians responded to the questionnaire. All four physicians assigned to the pediatric service and all four physicians assigned to the internal medicine service responded. Five of the six (83 per cent) physicians assigned to the obstetrics and gynecology service responded. This represented an aggregate response rate of 93 per cent of all physicians in the three services. It is to be noted that the figures pertaining to physicians in the following discussion may not add up to thirteen because some respondents did not answer every question.

Personal data

The age of the respondents ranged from twenty-seven to seventy-one,

with ten physicians between the ages of thirty and thirty-eight. The other physician was forty-one. Four of the physicians were civilians, three were captains, four were majors, and two were lieutenant colonels. Nine physicians were males while all thirteen were married. They graduated from medical school between 1933 and 1978, with ten graduating between 1970 and 1976. The other physician graduated in 1962. Seven of the physicians were board certified. Nine of the physicians have been fully trained for five or less years. All the military physicians have been in the Medical Corps for less than seven years.

Perceptions of nurse practitioners

The physicians were asked twenty-one questions which reflected how they perceived the utilization of nurse practitioners at Moncrief Army Hospital. Only one physician had been exposed to nurse practitioners as a medical student and that was for a period of two years. Eight physicians had exposure to nurse practitioners for an average of three years as residents. In contrast, only four physicians had been exposed to nurse practitioners while in practice. Two of these physicians had been exposed to nurse practitioners for three years, while one had two years and one had one year of exposure.

The physicians were divided on the perception of the nurse practitioner's role. Six of the physicians perceived the nurse practitioner as only a physician extender, while seven perceived the nurse practitioner as an independent but limited practitioner. However, in a similar question, only three physicians perceived the nurse practitioner as a technician to extend services while nine perceived the nurse practitioner as a colleague capable of working more or less independently. Although eight physicians

believed that nurse practitioners were trained primarily to offset the physician shortage, twelve physicians felt that nurse practitioners should be utilized even after the end of the physician shortage. In support of this belief, nine physicians did not feel that nurse practitioners and physician assistants were intended to fill the same role.

Ten of the physicians felt that the nurse practitioners were provided adequate support in all respects.

Interaction between physicians and nurse practitioners varied greatly. Only one physician reviewed nurse practitioner records or discussed patients on a daily basis. Five physicians performed this function weekly and one performed it monthly. One physician indicated that he/she never performed this function.

The physicians had a high regard for the nurse practitioners. Ten physicians did not feel that nurse practitioners treated patients too slowly. Similarly, eleven physicians were comfortable relying on the nurse practitioners' judgment within their designated functions. In addition, while only four physicians categorically indicated that nurse practitioners should make decisions on their own initiative, the other nine physicians indicated that it depended on the complexity of the case. This high regard was also reflected by their perception of how the nurse practitioner spent his/her day. Nine physicians perceived that the nurse practitioner spent over six hours in direct patient care activities while two more physicians perceived that the nurse practitioner spent over five hours in direct patient care activities. Nine physicians perceived that less than one hour each was spent in consultations with physicians, consultations with other-than-physicians, administrative matters, and professional/educational

matters. Interestingly, only one physician indicated not knowing how the nurse practitioners spent their day.

The physicians believed that nurse practitioners were accepted very well or satisfactorily by all of Moncrief Army Hospital's staff. The only exceptions were two physicians who did not believe that head nurses accepted the nurse practitioners well and one physician who did not believe that physician assistants accepted the nurse practitioners well. However, at least four physicians did not know how nurse practitioners were accepted by head nurses, staff nurses, nursing supervisors, physician assistants, AMOSISTs, or pharmacists.

There was no clear consensus as to what hindered the nurse practitioners most from contributing as much as they could. Three physicians felt that the lack of experience was the most important factor hindering the nurse practitioners. Two physicians felt that nurse practitioners lacked ancillary support personnel, two physicians felt that there was resistance from nursing supervisors, one physician felt that the nurse practitioners lacked confidence, one physician believed that there was resistance from new patients who had not been treated by a nurse practitioner, and one physician felt that there was resistance from the clinic's physicians. Every listed reason on the questionnaire was indicated by at least one physician as being one of his/her five reasons why nurse practitioners were hindered in their performance.

The physicians were also divided as to why nurse practitioners were utilized in their clinics. Three physicians felt that nurse practitioners permitted physicians to spend more time on complex cases, three felt that nurse practitioners provided a screening mechanism before the patient saw a physician, four felt nurse practitioners increased the amount of patient

education, and two felt that nurse practitioners provided treatment for patients previously uncared for. No physician felt that the most important reason for utilizing nurse practitioners was a mandate from higher authority or to permit physicians to spend more time on other professional matters or to increase the amount of care given to secondary problems and symptoms.

Regardless of why nurse practitioners were utilized in their clinics, the physicians were satisfied with their functioning in the clinic. Only one physician was very dissatisfied with the integration of the nurse practitioner role with the role of others in the clinic. One other physician was dissatisfied with the nurse practitioner's contribution to the clinic's practice and the type and number of patients the nurse practitioner was treating. Seven physicians overall were satisfied with nurse practitioner utilization in the clinic, four were very satisfied, and one was dissatisfied.

It is apparent that the large majority of physicians was aware of the skill level and credentialling of the nurse practitioner specialties. In the obstetrics and gynecology clinic, only one physician felt that a nurse practitioner was not competent to monitor patients during normal labor, monitor labor induced by regulated oxytoxic infusion, assist at delivery, or perform preoperative preparation. Two physicians felt that the nurse practitioner was not competent to monitor labor for patients with regional anesthesia. Similarly, only one physician thought the nurse practitioner was not authorized to take an obstetrics or gynecology history, order limited x-ray studies, monitor patients during normal labor or with regional anesthesia, assist at delivery, or perform preoperative preparation. Two physicians felt that nurse practitioners were not

authorized to monitor labor induced by regulated oxytoxic infusion. However, in fact, the obstetrics and gynecology nurse practitioners were credentialled and authorized to perform all the above skills.

The four internists were also aware of the nurse practitioner's skill level. Only one physician thought that nurse practitioners were not authorized to collect culture and smear specimens, perform Pap smears, diagnose and treat acute minor illnesses, or educate how to care for acute minor illnesses. In fact, the medicine nurse practitioners are credentialled to perform all the above skills. No physicians felt that the medicine nurse practitioners were not competent to perform any of the skills.

The four pediatricians were very aware of the nurse practitioner's skill level. Only one physician felt that the pediatric nurse practitioner was not authorized to provide direct nursing services to select newborn and pediatric inpatients. Two physicians felt that nurse practitioners were not authorized to perform a newborn discharge physical. However, in fact, the pediatric nurse practitioners are credentialled to perform all the above skills.

In general, eleven of the physicians indicated that they felt nurse practitioners were being appropriately utilized at Moncrief Army Hospital.

Application of criteria

Four criteria were established in this study pertaining to physician perception of whether nurse practitioners are appropriately utilized at Moncrief Army Hospital.

The first criterion is that nurse practitioners are appropriately utilized if 85 per cent of the physicians accepted the nurse practitioners. This criterion is met because 100 per cent of the physicians accepted

the nurse practitioners very well or satisfactorily.

The second criterion is that nurse practitioners are appropriately utilized if 85 per cent of the physicians perceived the nurse practitioner as more than a technician who extends the services of the physician. This criterion is not met because 25 per cent of the physicians did, in fact, perceive the nurse practitioner as a technician. Also, in a similar question, only 54 per cent perceived the nurse practitioner as an independent but limited practitioner. Thus, it is apparent that there was no general physician consensus that nurse practitioners were more than a technician who extends the physician's services.

The third criterion is that nurse practitioners are appropriately utilized if 85 per cent of the physicians relied on the judgment of nurse practitioners within their designated functions. This criterion is clearly met because 92 per cent of the physicians were comfortable relying on the nurse practitioner's judgment.

The last criterion is that nurse practitioners are appropriately utilized if 85 per cent of the physicians were satisfied with the nurse practitioners' utilization in their clinics. This criterion is met because 92 per cent of the physicians were satisfied.

In summary, three of the four criteria are met. The only physician criterion that is not met is that less than 85 per cent of the physicians perceived the nurse practitioner as more than a technician who extends the services of the physician.

Head Nurse Perceptions

Nine of the available eleven head nurses responded to the questionnaire. This equates to an 82 per cent response rate. However, the

figures pertaining to head nurses in the following discussion may not add up to nine because some respondents did not answer every question.

Personal data

The age of the respondents ranged from twenty-seven to forty-one with five between the ages of twenty-seven and twenty-nine. The others were thirty-two, thirty-eight, forty, and forty-one. All were captains with an average of 6.3 years in the Army Nurse Corps. However, the range was from one to ten years of service with three having ten years. Five nurses had civilian nursing experience ranging from two to five years. Five of the officers were female and seven of the officers were married. Only two of the nurses were taking educational courses and neither was health care related. Four of the nurses considered themselves specialized in surgical nursing while four considered themselves specialized in medicine.

Perceptions of nurse practitioners

The head nurses were asked eighteen questions which reflected how they perceived the utilization of nurse practitioners at Moncrief Army Hospital. Only two of the head nurses had been exposed, for an average of one year, as nursing students to nurse practitioners. In contrast, six had been exposed, for an average of four years, as registered nurses to nurse practitioners.

Eight of the head nurses believed that nurse practitioners were not physician extenders but, in fact, should have been independent but limited practitioners. Eight perceived the nurse practitioner as a physician's colleague and not a technician. All nine saw a role for the nurse practitioner even if there were not a physician shortage, while eight believed

that the nurse practitioner was not trained primarily to offset the physician shortage. Also, five believed that nurse practitioners and physician assistants were not intended to perform the same role.

Five of the head nurses did not know whether the nurse practitioners were provided adequate support. This was understandable because contact with the nurse practitioners was limited. Only one head nurse discussed patients with a nurse practitioner on a daily basis, two on a monthly basis, while two never discussed patients. The other four head nurses discussed patients only as the need arose.

The head nurses had a high regard for the nurse practitioners. None of the head nurses felt that nurse practitioners treated patients too slowly. Similarly, all of the head nurses were comfortable relying on the nurse practitioners' judgment. Five believed that nurse practitioners should have made decisions on their own initiative, while the other four believed it depended on the complexity of the case. This high regard was also reflected by their perception of how the nurse practitioner spent his/her day. Five of the head nurses perceived that four hours were spent in direct patient care activities, one hour was spent consulting with the physician, one hour was spent consulting with others, one hour was spent in professional/educational matters, and one hour was spent in administrative matters. The other four head nurses did not know how the nurse practitioner spent his/her day.

The head nurses perceived the nurse practitioners as being accepted by Moncrief Army Hospital's staff, with the notable exception of physicians. Only five perceived the nurse practitioners as being satisfactorily

accepted by their ward physicians, while three indicated that the nurse practitioners were not well accepted. Four perceived other physicians as accepting them in a satisfactory manner, while four other head nurses indicated that they did not know how other physicians perceived nurse practitioners. In contrast, all perceived head nurses and staff nurses as accepting the nurse practitioners while six of the head nurses perceived nursing supervisors as accepting nurse practitioners. Similarly, seven head nurses perceived patients as accepting nurse practitioners. The head nurses indicated less knowledge towards whether support personnel accepted nurse practitioners. Thus, while five head nurses perceived physician assistants, clerical staff, AMOSISTs, and pharmacists as satisfactorily accepting nurse practitioners, the other four did not know.

Three head nurses perceived that the resistance of clinic/ward physicians hindered nurse practitioners the most from contributing as much as they could. Two perceived nursing supervisors while two others perceived the resistance of new patients who had not been treated by a nurse practitioner as hindering the nurse practitioner. One perceived the lack of physical facilities as being the most hindrance. In contrast, no head nurse perceived the lack of adequate training in the nurse practitioner program as hindering the nurse practitioners. Similarly, only one indicated the lack of confidence or resistance of staff nurses as the least hindrance.

The head nurses were consistent in their perception of why nurse practitioners were utilized at Moncrief Army Hospital. Five of the head nurses perceived nurse practitioners as being utilized to increase the amount of patient education. Two others felt that the nurse practitioner was utilized to permit physicians to spend more time on complex cases. One

other head nurse felt the nurse practitioner provided a screening mechanism before the patient saw a physician. Interestingly, one head nurse believed that the most important reason for utilizing nurse practitioners at Moncrief Army Hospital was a mandate of higher authority.

In contrast, four head nurses felt that a mandate of higher authority was the least important reason for utilizing nurse practitioners. Three head nurses felt that the least important reason for utilizing nurse practitioners was to permit physicians to spend more time on other professional matters. One head nurse felt that the least important reason was to provide treatment for patients previously uncared for while another felt the least important reason was to provide a screening mechanism before the patient saw a physician.

It is apparent that the large majority of head nurses was aware of the skill level and credentialling of all three nurse practitioner specialties. Only one head nurse felt that a nurse practitioner was not competent to perform Pap smears, microscopic examination of vaginal/rectal smear specimens, monitor labor induced by regulated oxytoxic infusion, monitor labor for patients with regional anesthesia, assist at delivery, or insert IUD in multiparious women. Similarly, two head nurses thought nurse practitioners were not authorized to perform Pap smears, monitor labor induced by regulated oxytoxic infusion, or monitor labor for patients with regional anesthesia. One other head nurse thought nurse practitioners were not authorized to provide primary care for chronically ill patients who were stable, perform normal postpartum clinic, inpatient, or discharge examination, monitor patients during normal labor, assist at delivery, insert IUD in multiparious women, provide normal newborn care, or conduct

newborn admission or discharge physical. However, in fact, all the nurse practitioners were credentialled to perform the above skills.

In general, six of the head nurses indicated that they felt nurse practitioners were being appropriately utilized while two did not know. Only one felt the nurse practitioners were not being appropriately utilized because their positions involved too many administrative duties.

Application of criterion

The criterion pertaining to head nurses is that nurse practitioners are appropriately utilized if 85 per cent of the head nurses understood and accepted the role of the nurse practitioners. This criterion is met.

Eighty-nine per cent of the head nurses perceived the nurse practitioner as more than a physician extender who was trained only to fill a gap created by the physician shortage. One hundred per cent of the head nurses were willing to rely on the judgment of the nurse practitioners within their range of expertise. Similarly, all head nurses indicated acceptance of nurse practitioners. Lastly, 89 per cent of the head nurses understood the skill level possessed by the nurse practitioners.

Accordingly, the nurse practitioner is being appropriately utilized at Moncrief Army Hospital as pertains to the head nurse criterion.

Patient Perceptions

One hundred questionnaires were distributed each to the obstetrics and gynecology clinic, internal medicine clinic, and pediatric clinic. However, only 286 questionnaires were actually given to patients. Of this number, 279 patients responded. Since twenty-three of these questionnaires were insufficiently completed, a total of 256 questionnaires was utilized in this study. This represents a 90 per cent useable response

rate and is deemed representative of the patient population. It is noted that the figures pertaining to patients in the following discussion may not add up to 256 because some respondents did not answer every question.

Personal data

The age of the respondents ranged from fifteen to eighty-eight. Fifty-six per cent of the patients were between twenty-one and fifty, and 26 per cent were between fifty and sixty-five. Seven per cent were between sixty-five and eighty-eight (all of whom were being treated in the internal medicine clinic). Sixty-nine per cent were females. The status of the patients was evenly distributed among retired, dependents of retired, and dependents of active duty. These percentages were twenty-nine, twenty-nine, and thirty, respectively. The active duty represented only 11 per cent of the patients. The ranks were predominantly noncommissioned officers. Twelve per cent were E-5s, 19 per cent were E-6s, 23 per cent were E-7s, and 12 per cent were E-8s. The largest officer groups were 7 per cent for O-3s and 5 per cent for O-6s.

Consistent with the rank structure was the education level. Forty per cent of the respondents had graduated from high school and another 29 per cent had some college. At the ends of the spectrum, 15 per cent had not graduated from high school while 12 per cent had a baccalaureate degree.

Perceptions of nurse practitioners.

Seventy per cent indicated that they knew a nurse practitioner had additional formal education to function in an expanded role in ambulatory care settings. In addition, 92 per cent indicated that they would be willing to be treated by a nurse practitioner if a physician were not

available. Similarly, 80 per cent believed that nurse practitioners should be utilized even if there were no longer a physician shortage.

However, 74 per cent felt that a nurse practitioner should be an assistant to the physician and not an independent practitioner.

Sixty-two per cent of the respondents had been treated by a nurse practitioner. Eighty-one per cent of those felt they had received satisfactory care. Another 16 per cent indicated they had sometimes received satisfactory care. The medical conditions for which they were treated ranged in severity from an "upset stomach" to "minor surgery." Only 45 per cent of the patients who had been treated by a nurse practitioner would have preferred seeing a physician. Of the 62 per cent who had been treated by a nurse practitioner, 31 per cent had been treated by only one nurse practitioner, 35 per cent had been treated by two different nurse practitioners, and 23 per cent had been treated by three different nurse practitioners.

Seventy-five per cent of the respondents became a patient of a nurse practitioner by means of the appointment system. Thirteen per cent were referred by a physician. Only 4 per cent personally requested a nurse practitioner. Similarly, only 2 per cent were referred by another nurse practitioner.

It is apparent, however, that the patients were unaware of the skill level of the nurse practitioners. In the pediatric clinic, over 40 per cent of the respondents felt that only a physician should perform a newborn admission or discharge physical, order laboratory and x-ray tests, or prescribe authorized medications. In contrast, less than 25 per cent of the respondents felt that only physicians should perform a well-baby history

and physical, perform a well-child physical for preschool, athletics, overseas and adoption, conduct a Denver Development Screening Test, collect specimens for cultures and smears, conduct a well-baby clinic, provide direct nursing services to select newborns and pediatric inpatients, or diagnose and treat common minor illnesses. Furthermore, less than 10 per cent of the respondents felt that only physicians should provide normal newborn, infant, and child care, growth and development education, or educate the patient to care for individual acute and chronic illnesses.

In the obstetrics and gynecology clinic, over 40 per cent of the respondents felt that only a physician should conduct a microscopic examination of vaginal/rectal smear specimens, monitor labor induced by regulated oxytoxic infusion, prescribe authorized medications, measure and insert diaphragms, or insert IUD in multiparious women. In contrast, less than 25 per cent of the respondents felt that only physicians should perform a routine gynecology and breast examination, a normal postpartum clinic examination, order routine pre- and post-natal laboratory studies, monitor patients during normal labor, assist at delivery, initiate referral to other medical/nursing services, and perform pre-operative preparation. Furthermore, less than 10 per cent of the respondents felt that only physicians should perform family planning, obstetrics orientation, prenatal classes, normal newborn care, and postpartum classes.

In the internal medicine clinic, over 40 per cent of the respondents felt that only a physician should perform a complete physical assessment, obtain a comprehensive data base and periodic evaluation, and prescribe authorized medications. In contrast, less than 25 per cent of the respondents felt that only a physician should order selected laboratory,

x-ray and EKG tests, collect culture and smear specimens, initiate referral to other medical/nursing services, educate how to care for health maintenance and chronic illnesses, and educate how to care for acute minor illnesses.

In contrast to the patients' perceptions, it is noted that the nurse practitioners at Moncrief Army Hospital are, in fact, credentialled to perform all the functions discussed supra.

Application of criteria

Two criteria were established in this study pertaining to patient perceptions of whether nurse practitioners are appropriately utilized at Moncrief Army Hospital.

The first criterion is that nurse practitioners are appropriately utilized if 75 per cent of the patients would accept care provided by a nurse practitioner. As indicated in the discussion, this criterion is satisfied because 92 per cent of the patients were willing to be treated by a nurse practitioner. However, it should be emphasized that this willingness was contingent upon the unavailability of a physician. Nevertheless, 81 per cent of those who had been treated by a nurse practitioner felt they had received acceptable care. This suggests that they would be willing to continue to be treated by a nurse practitioner.

The second criterion is that nurse practitioners are appropriately utilized if 75 per cent of the patients were aware of 75 per cent of the skills possessed by nurse practitioners. This criterion is not satisfied in any of the specialties. Of the eighteen skills for which nurse practitioners were credentialled in the pediatric clinic, 75 per cent of the patients were aware of only eleven skills, i.e., 62 per cent, as being

performed by nurse practitioners. Of the twenty-six skills for which nurse practitioners were credentialled in the obstetrics and gynecology clinic, 75 per cent of the patients were aware of only twelve skills, i.e., 46 per cent, as being performed by nurse practitioners. Lastly, of the fourteen skills for which nurse practitioners were credentialled in the internal medicine clinic, 75 per cent of the patients were aware of only eight skills, i.e., 57 per cent, as being performed by nurse practitioners.

In summary one of the two criteria is not met pertaining to patient perceptions of whether nurse practitioners are appropriately utilized at Moncrief Army Hospital.

Summary of Criteria vis-à-vis Perceptions

Seven criteria were applied to nurse practitioners' perceptions. Three of these criteria were not met. First, the obstetrics and gynecology nurse practitioners were performing less than 90 per cent of the skills for which they were formally trained to perform. One or both of these nurse practitioners were performing only 67 per cent of these skills. Second, less than 85 per cent of the nurse practitioners were seeing their patients for approximately thirty minutes each. In fact, four of the nurse practitioners, i.e., 57 per cent, saw their patients for approximately fifteen minutes each. Third, less than 85 per cent of the nurse practitioners believed they were being appropriately utilized. Only five of the seven, i.e., 71 per cent, felt they were appropriately utilized.

Four criteria were applied to physicians' perceptions. One of these criteria was not met, i.e., less than 85 per cent of the physicians perceived the nurse practitioner as more than a technician who extends the

services of the physician. Instead, only 75 per cent of the physicians perceived the nurse practitioner as more like a colleague capable of working more or less independently.

One criterion was applied to head nurses' perceptions. This criterion was met because over 85 per cent of the head nurses understood and accepted the role of the nurse practitioners.

Two criteria were applied to patients' perceptions. One of these criteria was not met because less than 75 per cent of the patients were aware of 75 per cent of the skills possessed by nurse practitioners. In fact, the highest awareness level was only 62 per cent in the pediatric clinic. The lowest awareness level was 46 per cent in the obstetrics and gynecology clinic.

Comparison of Perceptions with Literature Review

Although the perceptions of the nurse practitioners, physicians, head nurses, and patients have been applied to the criteria, it is necessary to compare perceptions of the four groups to previous research. Such a comparison can determine whether the findings are consistent with previous research as well as identify areas of misunderstanding, role conflict, or role ignorance. This can lead to recommendations to ensure appropriate utilization of the nurse practitioners at Moncrief Army Hospital.

The nurse practitioners at Moncrief Army Hospital perceived their role consistent with the literature. They spent the majority of their day in direct patient care activities. The patient workload was also consistent with previous research findings. Seventeen per cent of the internal medicine clinic's workload, for example, consisted of patients between sixty-five and eighty-eight, while another 51 per cent were between fifty and

sixty-five. Similarly, 69 per cent of all patients were female.

The nurse practitioners at Moncrief Army Hospital appeared to have a clear image of their role. They unanimously differentiated themselves from physician assistants. Interestingly, however, only five of the seven felt they should not have performed non-nurse practitioner duties. Thus, all the nurse practitioners had not precisely delineated their role from traditional nursing.

Contrary to the research discussed in the literature review, the overwhelming majority (92 per cent) of the queried physicians at Moncrief Army Hospital were willing to utilize a nurse practitioner. However, consistent with research, this could be explained by the relatively young age of the physicians, relatively recent graduation from medical school, and their previous exposure to nurse practitioners. In addition, an institutional setting such as Moncrief Army Hospital vis-à-vis solo practice has been found to facilitate utilization of nurse practitioners.

However, this study has also identified a common theme found in the literature, i.e., although physicians were willing to utilize nurse practitioners, they limited the duties which the nurse practitioner can perform. Thus, although the nurse practitioners in Moncrief Army Hospital's internal medicine and pediatric clinics utilized a wide range of their trained skills, the obstetrics and gynecology nurse practitioners were somewhat restricted. As indicated in the literature, the restricted skills were decision-making vis-à-vis technical. It should be noted that this study did not solicit an explanation for these restrictions. It is possible that there were cogent reasons for these restrictions and additional information and research should be obtained before a judgment is made on the number of

skills utilized by the obstetrics and gynecology nurse practitioners.

Lastly, unlike previous research, the physicians in this study were very knowledgeable of the skills possessed by their nurse practitioners. Only two physicians of the thirteen felt that nurse practitioners were not competent to perform one skill while another physician felt that nurse practitioners were not competent to perform four other skills. Thus, of a total of fifty-eight skills for which nurse practitioners were trained, the physicians felt that the nurse practitioners could perform 91 per cent of them.

The head nurses reflected the perceptions of the traditional nursing profession. Their responses were consistent with previous research findings. Eight of the nine (89 per cent) of the head nurses perceived the nurse practitioners at Moncrief Army Hospital as independent but limited practitioners and not as physician extenders. However, there was confusion as to the nurse practitioner's role because only five of the head nurses felt that nurse practitioners and physician assistants did not fill the same role.

Lastly, patients at Moncrief Army Hospital perceived nurse practitioners somewhat similarly to previous research. Unlike other studies, many more patients knew what a nurse practitioner was. This could be explained by the relatively high education level (only 15 per cent were non-high school graduates) and relatively high economic status (only 5 per cent were below grade E-5). Nevertheless, consistent with other research, 74 per cent wanted the nurse practitioner to be an assistant to the physician and not an independent practitioner. Also, like previous research, the majority of patients who had previously been treated by a nurse

practitioner preferred to see the nurse practitioner again. This result, however, must be considered in light of the fact that the nurse practitioners at Moncrief Army Hospital received 75 per cent of their patients through the central appointment system and only 2 per cent of their patients indicated that they had personally requested a nurse practitioner.

In conclusion, the responses of the four groups were generally consistent with previous research. This consistency buttresses the validity of applying the four groups' perceptions to this study's criteria. In addition to the criteria, the differences noted supra between previous research and current findings should be evaluated with the intent to eliminate inappropriate utilization of the nurse practitioners at Moncrief Army Hospital.

Footnotes

[1]U.S. Department of the Army, Manpower Survey Report for USAMEDDAC, Ft. Jackson, S.C.: Pediatric Service (23 March 1981): pp. 9-11.

[2]U.S. Department of the Army, Manpower Survey Report for USAMEDDAC, Ft. Jackson, S.C.: Internal Medicine Clinic (23 March 1981): pp. 4-7.

[3]U.S. Department of the Army, Manpower Survey Report for USAMEDDAC, Ft. Jackson, S.C.: OB-GYN Clinic (23 March 1981): pp. 8-10.

III. CONCLUSIONS AND RECOMMENDATIONS

Conclusions

It is concluded that the nurse practitioners assigned to Moncrief Army Hospital, Fort Jackson, South Carolina, are not being appropriately utilized.

As discussed supra, this conclusion is founded on the fact that only nine of the fourteen criteria established in this study were met. The five criteria that were not satisfied were:

1. The nurse practitioners were not performing 90 per cent of the skills for which they were formally trained to perform. Two nurse practitioners were performing only 67 per cent of the skills for which they were formally trained.

2. Less than 85 per cent of the nurse practitioners were seeing their patients for approximately thirty minutes each. Although three of the nurse practitioners saw their patients for approximately thirty minutes, the other four nurse practitioners saw their patients for only fifteen minutes each.

3. Less than 85 per cent of the nurse practitioners believed they were being appropriately utilized. Two nurse practitioners felt they spent too much time in non-direct patient care activities or felt their role should be broadened to include wellness vis-à-vis illness teaching.

4. Less than 85 per cent of the physicians perceived the nurse practitioner as more than a technician who extends the services of the

physician. Twenty-five per cent of the physicians perceived the nurse practitioner as a technician who extends the services of the physician.

5. Less than 75 per cent of the patients were aware of 75 per cent of the skills possessed by nurse practitioners. In fact, the highest awareness level was only 62 per cent in one clinic.

These conclusions are supported by the fact that the respondents were demographically and perceptually consistent with findings of previous research. Areas of inconsistency included a higher degree of physician willingness to utilize nurse practitioners at Moncrief Army Hospital, physician cognizance of skills possessed by nurse practitioners, and a larger number of patients who knew about nurse practitioners. Interestingly, all these areas of inconsistency tend to make the respondents' replies more meaningful since they demonstrate a higher level of awareness toward nurse practitioner utilization.

Recommendations

Having determined that the nurse practitioners assigned to Moncrief Army Hospital are not being appropriately utilized in accordance with the study's criteria, it is necessary to recommend actions to ensure their appropriate utilization. These recommendations are targeted at the criteria which were not met in this study. In addition, the next to last recommendation resulted from replies from head nurses.

The first recommendation is to ensure that physicians are aware of the skills which the nurse practitioners were formally trained to perform. The chiefs of the three services should compare the duties of their nurse practitioners with their credentials and the objectives of the nurse

practitioner training programs. Given the workload, staffing, and personalities of the three services, it is possible that the nurse practitioners' current utilization is most appropriate. Nevertheless, increasing the awareness of the physicians has proven to be useful in ensuring that nurse practitioners are appropriately utilized.[1]

The second recommendation is to ensure that the nurse practitioners' workloads are not too burdensome which compels nurse practitioners to spend too little time with each patient. Ideally, thirty minutes should be allotted for each patient.[2] The role of the nurse practitioner emphasizes counseling and education as well as treatment. These functions necessarily consume more time but are a vital portion of the nurse practitioner's responsibilities. Review of the nurse practitioners' workloads will also ensure that they are not being utilized as AMOSISTs or physician assistants, which is contrary to AMEDD policy.[3] Likewise, this review will indicate whether a nurse practitioner is devoted to only one procedure. This malutilization is particularly prevalent with the obstetrics and gynecology nurse practitioners who are assigned to run a specialized clinic.[4]

The third recommendation is to ensure that all the physicians as well as support personnel in the three clinics understand the role of the nurse practitioner. This requires an aggressive posture by the nurse practitioners. They must be willing to become change agents who delineate between direct patient care activities and non-direct patient care activities. They must assert themselves as being more of an independent practitioner rather than a technician who extends the services of the physicians. This requires that the nurse practitioners constantly seize opportunities to increase the awareness of the physicians and to expand their areas of responsibility.

Moncrief Army Hospital will require periodic adjustments and evaluations. This undoubtedly includes evaluation of whether the nurse practitioners are appropriately utilized. Nevertheless, this study has revealed that, at this time, the nurse practitioners can be appropriately utilized with very little additional effort. Such effort will be most beneficial to the nurse practitioners, physicians, head nurses, and most important, the patients of Moncrief Army Hospital.

Footnotes

[1]Eric L. Herzog, "The Underutilization of Nurse Practitioners in Ambulatory Care," Nurse Practitioner 2 (September/October 1976): 28.

[2]Elizabeth Finn, "Nurse Practitioner Update," Briefing presented at the Army Nurse Corps Professional Development Work Shop, Washington, D.C. (September 1978): 2.

[3]Ibid., p. 3.

[4]Ibid.

[5]Herzog, p. 27.

APPENDIX A

INSTRUCTIONAL OBJECTIVES OF THE

ADULT MEDICAL-SURGICAL NURSE PRACTITIONER COURSE

The nurse practitioners should perform an honest self-assessment because studies have shown that many nurse practitioners have a rather low self-image and require training to negotiate roles and build a team.[5] In addition, the nurse practitioners must constantly gain experience. This is indicated by the fact that ten of the physicians at Moncrief Army Hospital cited lack of experience as a factor hindering the nurse practitioners' contribution.

The fourth recommendation is for the nurse practitioners to conduct an inservice training program for the head nurses. This program should explain the role of the nurse practitioners at Moncrief Army Hospital and how the nurse practitioners interface with the other nursing elements. This training is necessary because almost half of the head nurse respondents felt that the nurse practitioners and physician assistants were intended to fill the same role. Such role ambiguity can only lead to inappropriate utilization of the nurse practitioners and should be rectified as quickly as possible.

The last recommendation is to conduct an educational program for patients. Almost 75 per cent of the patients did not realize the degree of professional independence possessed by a nurse practitioner. Accordingly, reading material should be periodically distributed in all the clinics' patient waiting areas which explain the roles of all the health care providers in their clinic. This would facilitate the patients' understanding of where the nurse practitioner fits in the health care team.

By implementing these five recommendations, this study asserts that the nurse practitioners at Moncrief Army Hospital will be appropriately utilized. Certainly, a health care system as complex and dynamic as

INSTRUCTIONAL OBJECTIVES

*1. Maintain active involvement in changes, future and present, that center around expanded practice.

*2. Serve as a consultant to nurses, physicians, clients and significant others.

*3. Educate individuals or groups in either problem specific or general health maintenance regimes.

*4. Evaluate the level of functioning of self and others in a group.

*5. Demonstrate leadership in a group of peers or clients.

*6. Integrate the principles and techniques of interviewing and counseling into the biopsychosocial appraisal of the client.

*7. Provide initial and continual health assessment to clients utilizing accepted principles and techniques of defined historical, physical, and diagnostic data collection.

*8. Participate in record audit and peer review.

*9. Assess and manage patients with common minor health care problems utilizing established health care guidelines, appropriate physician input, referrals, professional nursing judgment, and problem-oriented medical record method.

*10. Evaluate each client's psychosocial status.

*11. Formulate and implement a plan of care that promotes the client's psychosocial well-being.

*12. Assess and manage patients with stable chronic disease states, utilizing established health care guidelines, physiologic principles, appropriate medical input, referrals, professional judgment, and the problem-oriented medical record method.

*13. Participate in the revision and/or development of health care guidelines.

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*Terminal crucial objectives

SOURCE: U.S. Department of the Army. Program of Instruction: Course 6F-66H, Nurse Practitioner Adult Medical-Surgical Health Care (February, 1981), p. 1.

APPENDIX B

INSTRUCTIONAL OBJECTIVES OF THE

OBSTETRICS AND GYNECOLOGY NURSE PRACTITIONER COURSE

INSTRUCTIONAL OBJECTIVES

*1. Demonstrate professional judgment and clinical competence as a member of the obstetric and gynecology team by providing primary health care to antepartum, intrapartum, postpartum, newborn and selected gynecologic patients by assessing needs, detecting complications, making appropriate referrals to other members of the health care team and through counseling and teaching the patient(s) and the family(ies).

*2. Assume medically delegated responsibility for the management of selected obstetric and gynecologic patients and of newborns under the supervision of an obstetrician and/or pediatrician.

*3. Apply knowledge of the bio-psycho-social aspects of childbearing, infertility, genetics, contraception and sterilization to individual patient(s) and family(ies).

*4. Demonstrate ability in planning and conducting individual and group conferences for the patient(s) and the family(ies) to include counseling and education for the promotion and maintenance of health.

*5. Evaluate health delivery services, agencies and resources for appropriateness in meeting a particular need of the individual patient(s) and/or the family(ies) and initiate necessary referrals.

*6. Utilizing accepted principles and techniques of physical and diagnostic data collection, provide complete physical assessment for patients and make appropriate referrals for deviations from the norm.

7. Identify and resolve problems in selected OB/GYN settings

*Crucial Objective

to include self directed experience in the implementation of the nurse practitioner role.

8. Be able to plan and conduct inservice educational programs and provide consultation services for both inpatient and outpatient personnel regarding the nursing management of the obstetric and gynecologic patient.

9. Maintain active involvement in changes, present and future, that center around the expanded role of the nurse and related health care practice.

SOURCE: U.S. Department of the Army. Program of Instruction: Course 6F-F4, Nurse Practitioner Obstetric and Gynecology Course for Army Nurse Corps Officers (June, 1978), p. 1.

APPENDIX C

INSTRUCTIONAL OBJECTIVES OF THE

PEDIATRIC NURSE PRACTITIONER COURSE

INSTRUCTIONAL OBJECTIVES

*1. Appraise health and developmental status by obtaining a comprehensive health history and by performing physical examination.

*2. Formulate and implement a plan of care utilizing the problem oriented approach.

*3. Integrate the principles of growth, development and nutrition when counseling parents to promote optimal physical health and personality development.

*4. Identify and implement appropriate intervention, support, and follow-up care for families in crisis.

*5. Perform well child care from the newborn period through adolescence.

*6. Advise and counsel parents regarding child rearing and growth and development.

*7. Provide management of the child with acute minor/chronic illnesses according to accepted protocols. Consult and collaborate with the physician when necessary and assume complete responsibility when appropriate. Reassess clinical status and modify management as indicated.

*8. Present patient cases to the physician/PNP preceptor in an accurate and systematic manner.

*9. Manage the care of the normal newborn in the nursery setting in collaboration with the physician.

*10. Perform routine developmental assessment and screening evaluations on children in coordination with other health professionals.

*11. Prescribe selected medications according to established guidelines.

*12. Participate in multidisciplinary conferences and coordinate with all members of the health team to provide comprehensive care.

*13. Adapt to the role of the pediatric nurse practitioner through progressive independent practice.

14. Discuss controversial issues that surround the expanded role.

15. Discuss current Army regulations regarding the expanded role and credentialing.

16. Evaluate the present system of health care delivery and strive to improve the system by formulating new approaches to care.

17. Identify all resources within the military community to help the child and his family.

18. Develop current protocols for expanded practice.

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*Terminal Crucial Objectives

SOURCE: U.S. Department of the Army. Program of Instruction: Course 6F-66D, Pediatric Nurse Practitioner (February, 1981), p. 1.

APPENDIX D

SAMPLE CREDENTIALS FORM FOR ADULT MEDICAL-SURGICAL NURSE PRACTITIONER AT MONCRIEF ARMY HOSPITAL

DEPARTMENT OF THE ARMY
MONCRIEF ARMY HOSPITAL
FORT JACKSON, SOUTH CAROLINA 29207

AMBULATORY CARE NURSE CLINICIAN EVALUATION

DATE _____

NAME _____ RANK _____ SSAN _____

The above named individual has been supervised and is competent to perform the following functions:

	YES	ONLY WITH DIRECT SUPERVISION	NO
1. DIAGNOSTIC PROCEDURES:			
a. Order selected laboratory studies			
b. Order selected radiologic studies			
c. Collect culture and smear specimens			
d. Perform Pap smears			
2. PATIENT MANAGEMENT FUNCTIONS:			
a. Diagnose and treat acute minor illnesses in accordance with local clinical guidelines			
b. Provide primary care for stable chronically ill patients in accordance with local clinical guidelines			
c. Prescribe medications approved by the commander			
d. Initiate referral to other medical/nursing services			
3. PATIENT EDUCATION AND COUNSELING:			
a. Care for health maintenance and long term illnesses			
b. Care for acute minor illnesses			

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REMARKS: _____

_____

_____

_____

_____

APPROVED BY: _____ _____
(Chief, Enter Appropriate Title,Service) (Date)

APPENDIX E

SAMPLE CREDENTIALS FORM FOR

OBSTETRICS AND GYNECOLOGY NURSE PRACTITIONER AT

MONCRIEF ARMY HOSPITAL

DEPARTMENT OF THE ARMY
MONCRIEF ARMY HOSPITAL
FORT JACKSON, SOUTH CAROLINA 29207

OB/GYN NURSE CLINICIAN EVALUATION

Date _____

Name _____ Rank _____ SSAN _____

The above named individual has been supervised and is competent to perform the following functions:

	YES	ONLY WITH DIRECT SUPERVISION	NO
1. PHYSICAL EXAMINATION AND HISTORY:			
a. Routine gynecological and breast examinations			
b. Antepartum examinations other than initial examination			
c. Normal post-partum clinic examination			
d. Normal post-partum inpatient examinations			
e. Normal post-partum discharge examinations			
f. Obstetrical history			
g. Gynecological history			
2. DIAGNOSTIC PROCEDURES:			
a. Order routine pre- and post-natal laboratory studies			
b. Order selected radiologic studies			
c. Perform Pap smears			
d. Cryosurgery			
e. Collect cervical, vaginal and rectal smears			
f. Microscopic examination of vaginal/rectal smear specimens			

	YES	ONLY WITH DIRECT SUPERVISION	NO
3. PATIENT MANAGEMENT FUNCTIONS:			
a. Monitor patients during normal labor			
b. Monitor labor induced by regulated oxytoxic infusion			
c. Monitor labor for patients with regional anesthesia			
d. Assist at delivery			
e. Diagnose and treat minor gynecological problems in accordance with local clinical guidelines			
f. Prescribe medications as approved by the Commander			
g. Measure for and insert diaphragms			
h. Insert IUDs in multiparious women			
i. Initiate referral to other medical/nursing services			
4. PATIENT EDUCATION AND COUNSELING:			
a. Family planning			
b. OB orientation			
c. Prenatal classes			
d. Normal new born care			
e. Post-partum classes			
f. Pre-operative preparation			

REMARKS: _____

_____

_____

_____

_____

APPROVED BY: _____ _____

(Chief, OB/GYN Service) (Date)

APPENDIX F

SAMPLE CREDENTIALS FORM FOR PEDIATRIC

NURSE PRACTITIONER AT MONCRIEF ARMY HOSPITAL

DEPARTMENT OF THE ARMY
MONCRIEF ARMY HOSPITAL
FORT JACKSON, SOUTH CAROLINA 29207

PEDIATRIC NURSE CLINICIAN EVALUATION

DATE _____

NAME _____ RANK _____ SSAN _____

The above named individual has been supervised and is competent to perform the following functions:

	YES	ONLY WITH DIRECT SUPERVISION	NO
1. PHYSICAL EXAMINATION AND HISTORY:			
a. Newborn admission physicals			
b. Newborn discharge physicals			
c. Routine well-baby physicals and history			
d. Well child physicals for pre-school, sports participation, overseas, and adoption			
2. DIAGNOSTIC PROCEDURES:			
a. Denver Developmental Screening Test			
b. Order selected laboratory procedures			
c. Order selected radiologic procedures			
d. Collect specimens for cultures and smears			
3. PATIENT MANAGEMENT FUNCTIONS:			
a. Conduct well-baby clinic			
b. Provide follow-up care for patients referred from physicians			
c. Provide direct nursing services to selected newborns and pediatric inpatients			
d. Diagnose and treat common minor illnesses in accordance with local clinical guidelines			
e. Prescribe medications approved by the commander			
f. Initiate referral to other medical/ nursing services			

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4. PATIENT EDUCATION AND COUNSELING:

	YES	ONLY WITH DIRECT SUPERVISION	NO
a.	Normal newborn care		
b.	Normal infant and child care		
c.	Normal growth and development		
d.	Care for individual acute and chronic illnesses		

REMARKS: _____

_____

_____

_____

_____

APPROVED BY: _____ _____
(Chief, Pediatric Service) (Date)

APPENDIX G

NURSE PRACTITIONER SURVEY QUESTIONNAIRE

NURSE PRACTITIONER SURVEY QUESTIONNAIRE

1. Personal data:

Age _____.

Sex _____.

Rank _____

Married: Yes_____No_____

Number of years in Army Nurse Corps _____.

Are you taking educational course(s) at present? Yes_____No_____

If yes, please identify: _____

Specialty as a nurse practitioner:

Pediatrics_____

OB/GYN_____

Adult medicine_____

Number of years of nursing experience:

Before NP course (Include civilian and military)_____

After NP course _____

2. Why did you want to become a nurse practitioner? (Please rank the 5 most important reasons in descending order of importance, i.e., 1=most important)

_____challenge of work

_____increased status

_____frustration of former work

_____more independence

_____greater influence on patient care

_____increased promotion potential

_____more collaboration with physicians

_____additional learning opportunities

_____assume more responsibility

_____increased job opportunities after the Army

_____other (specify)_____

3. How well are you accepted at this hospital by the following individuals?

	Very Well	Satisfactory	Not Well	Not at all	Don't Know
Clinic physicians					
Other physicians					
Head nurses					
Staff nurses					
Nursing supervisors					
Own patients					
New patients					
Physician assistants					
Clerical staff					
AMOSISTS					
Pharmacists					

4. Do you feel you are provided adequate:

	YES	NO
Professional Support Personnel(e.g., corpsmen)		
Administrative Support Personnel (e.g., clerks)		
Physical Facilities (e.g., office space)		
Supplies		

5. How many hours of an average duty day do you spend in the following:

Direct patient care activities (includes patient documentation)____

Consultation with physicians____

Consultation with other-than-physicians (e.g., nurses, NPs,

Pharmacist) ____

Administrative (non-patient related, e.g., OERs, SOPs, clerical)____

Professional/educational (non-patient related, e.g., in-services,

meetings) ____

Other (specify) _____

6. Which of the following at this hospital hinder you from contributing as much as you can? (Rank the 5 most important reasons in descending order, i.e., 1= hinders your contribution the most.)

____lack of confidence

____lack of adequate training in NP course

____lack of experience

____lack of ancillary support personnel

____lack of physical facilities

____resistance of clinic's physicians

____resistance of other physicians

____resistance of staff nurses

____resistance of nursing supervisors

____resistance of own patients

____resistance of new patients who have not been treated by a Nurse Practitioner

____other (specify:)_____

7. How would you rate your job satisfaction at this hospital?

____Very satisfied

____Satisfied

____Dissatisfied

____Dissatisfied to point of not wanting to continue as a Nurse Practitioner.

8. What are the 5 most satisfying aspects of being a Nurse Practitioner? (Please rank in descending order of satisfaction, i.e., 1 = most satisfying.)

____challenge of work

____increased status

____frustration of former work

____more independence

____greater influence on patient care

____increased promotion potential

____more collaboration with physicians

____additional learning opportunities

____assume more responsibility

____increased job opportunities after the Army

____other (Specify:)_____

9. How often does a physician review your records or discuss patients you have cared for?

____daily

____weekly

____monthly

____quarterly

____never

____other (Specify:)_____

10. How many minutes do you spend with an average patient?____

11. How many minutes would you prefer to spend with an average patient?____

12. How many patients do you see in an average day?____

13. How many patients would you prefer to see in an average day?____

14. Do you want your next assignment to be as a Nurse Practitioner? Yes____No____Undecided____.

15. Do you want to be utilized as a Nurse Practitioner throughout your Army career? Yes____No____Undecided____

16. In general, do you feel you are being appropriately utilized as a Nurse Practitioner at this hospital? Yes____No____ If no, please explain:

17. Do you substitute or "cover" for nurses who are not Nurse Practitioners? Yes____No____

18. Should you substitute or "cover" for nurses who are not Nurse Practitioners? Yes____No____

19. Do you personally feel that Nurse Practitioners and Physician Assistants were intended to fill the same role? Yes____No____

20. Check the most appropriate answer in both Column "A" and Column "B": (Completed by OB/GYN NP)

	COLUMN "A"		COLUMN "B"			
	Trained by NP course	Not trained by NP course	Perform indepen-dently	Perform with supervision	Not competent to perform	Not authorized to perform
Complete physical assess-ment of the normal woman						
Routine GYN and breast exam						
Antepartum exams(not initial)						
Normal post-partum clinic exam						
Normal post-partum inpatient exam						
Normal post-partum discharge						
OB history						
GYN history						
Order routine pre-and post-natal lab studies						
Order limited X-ray studies						
Perform Pap smears						
Microscopic exam of vaginal/ rectal smear specimens						
Monitor patients during normal labor						
Monitor labor induced by regulated oxytoxic infusion						
Monitor labor for patients with regional anesthesia						
Assist at delivery						
Diagnose and treat minor GYN problems						

	COLUMN "A"		COLUMN "B"			
	Trained by NP course	Not trained by NP course	Perform indepen-dently	Perform with supervision	Not competent to perform	Not authorized to perform
Prescribe authorized meds						
Measure and insert diaphragms						
Insert IUD in multi-parious women						
Initiate referral to other medical/nursing services						
Family planning						
OB orientation						
Prenatal classes						
Normal new born care						
Post-partum classes						
Pre-operative preparation						

21. Are there any skills not listed above which you are now performing which were not taught by the NP course?

____Yes

____No

If the answer above is yes, please identify those skills:

20. Check the most appropriate answer in both Column "A" and Column "B": (Completed by Medical NP)

	COLUMN "A"		COLUMN "B"			
	Trained by NP course	Not trained by NP course	Perform indepen-dently	Perform with supervision	Not competent to perform	Not authorized to perform
Complete physical assessment						
Comprehensive data base and periodic evaluation						
Order selected lab tests						
Order selected X-ray tests						
Order EKGs						
Collect culture and smear specimens						
Perform Pap smears						
Diagnose and treat acute minor illnesses						
Provide primary care for chronically ill patients who are stable						
Prescribe authorized meds						
Initiate referral to other medical/nursing services						
Educate how to care for health maintenance and chron-ic illnesses						
Educate how to care for acute minor illnesses						
Educate in pre-operative preparation						

21. Are there any skills not listed above which you are now performing which were not taught by the NP course?
____No ____Yes (Please identify:)_____

20. Check the most appropriate answer in both Column "A" and Column "B": (Completed by Pediatric NP)

	COLUMN "A"		COLUMN "B"			
	Trained by NP Course	Not trained by NP Course	Perform independently	Perform with supervision	Not competent to perform	Not authorized to perform
Newborn admission physical						
Newborn discharge physical						
Routine well-baby history and physical						
Well child physical for preschool, athletics, overseas, and adoption						
Denver Development Screening Test						
Order specific lab tests						
Order specific X-ray tests						
Collect specimens for cultures and smears						
Conduct well-baby clinic						
Provide follow-up care for patients referred by MD						
Provide direct nursing services to select newborns and pediatric inpatients						
Diagnose and treat common minor illnesses						
Prescribe authorized meds						
Initiate referral to other medical/nursing services						
Normal new born care patient education						
Normal infant and child care education						

	COLUMN "A"		COLUMN "B"			
	Trained by NP Course	Not trained by NP Course	Perform independently	Perform with supervision	Not competent to perform	Not authorized to perform
Normal growth and development education						
Educate patient to care for individual acute and chronic illnesses						

21. Are there any skills not listed above which you are now performing which were not taught by the NP Course?

____No

____Yes (Please identify:) _____

APPENDIX H

PHYSICIAN SURVEY QUESTIONNAIRE

PHYSICIAN SURVEY QUESTIONNAIRE

1. Personal data:

   Age_____

   Rank_____

   Sex: Male_____Female_____

   Married: Yes_____No_____

   Year of Graduation from medical school_____

   Specialty: OB/GYN_____Peds_____Med_____Derm_____Other (specify)_____

   Board certified Yes_____No_____

   Number of years in Medical Corps_____

   Number of years as fully trained physician (civilian and military)_____

2. How well do you think Nurse Practitioners (NP) are accepted at this hospital by the following individuals:

	Very well	Satisfac-tory	Not Well	Not at all	Don't Know
Your Clinic physicians					
Other physicians					
Head nurses					
Staff nurses					
Nursing supervisors					
Own patients					
New patients					
Physician assistants					
Clerical staff					
AMOSISTS					
Pharmacists					

3. Did you have exposure to NPs as a:

	Yes (indicate number of years)	No
Medical student		
Resident		
Practicing physician prior to Moncrief AH		

4. Do you perceive the NP as:

Physician extender____
or
Independent but limited practitioner____

5. Do you feel that NPs should only be utilized while there is a physician shortage? Yes____No____

6. Do you personally feel that NPs were trained primarily to offset the physician shortage? Yes____No____

7. How many minutes of an average day do you spend with your NPs on:

Consultations _____

Professional matters (not relating to a specific patient)_____

Administrative matters_____

Other (please specify)_____

8. Do you feel your NPs are provided adequate:

	Yes	No
Professional Support Personnel (e.g., corpsmen)		
Administrative Support Personnel (e.g., clerks)		
Physical Facilities (e.g., office space)		
Supplies		

9. Which of the following at this hospital do you think hinders your NPs from contributing as much as they can? (Rank the 5 most important reasons in descending order, i.e., 1 = hinders their contribution the most)

____lack of confidence

____lack of adequate training in NP course

____lack of experience

____lack of ancillary support personnel

____lack of physical facilities

____resistance of clinic's physicians

____resistance of other physicians

____resistance of staff nurses

____resistance of nursing supervisors

____resistance of own patients

____resistance of new patients who have not been treated by an NP

____other (specify:)_____

10. How often do you review your NPs' records or discuss patients the NPs have cared for:

____daily

____weekly

____monthly

____quarterly

____never

____other (specify:)_____

____not my assigned responsibility in the clinic.

11. Do you personally feel the NPs treat patients too slowly?

Yes____No____If yes, how long should an average patient be seen? (in minutes)____.

12. Do you personally feel the NPs and the Physician Assistants were intended to fill the same role? Yes____no____Undecided____

13. Should NPs perform duties of non-NP Army nurses (e.g., weekend supervisor)? Yes____No____

14. Are you comfortable relying on judgment of NPs pertaining to matters within their designated functions? Yes____No____

15. Should NPs make decisions on their own initiative?
Yes____No____Depends on complexity of case____

16. Why do you personally feel NPs are being utilized in your clinic? (Rank in descending order of importance, e.g., 1 = most important reason for utilizing NP).

____mandated by higher authority

____permit physicians to spend more time on complex cases

____permit physicians to spend more time on other professional matters (e.g., education, ward rounds)

____provide screening mechanism before patient sees physician

____provide treatment for patients previously uncared for

____increase amount of care given to secondary problems and symptoms

____other (please specify)_____

17. How satisfied are you with each of the following aspects of the NPs functioning in your clinic:

	Very Satisfied	Satisfied	Neither Satisfied nor Dissatisfied	Dissatisfied	Very Dissatisfied
Integration of NP role with role of others in clinic					
Competency of NP					
Adequacy of Army's NP course to prepare NP for clinic					
Contribution of NP to clinic's practice					
Type of patient NP is treating					
Number of patients NP is treating					
Overall evaluation of NP utilization in clinic					

18. Do you perceive the NP as a

____Technician to extend services
or
____Colleague capable of working more or less independently.

19. How many hours of an average duty day do you think your NP spends in the following:

Direct patient care activities (includes patient documentation)____

Consultation with physicians____

Consultation with other-than-physicians (e.g., nurses, NPs, Pharmacist)____

Administrative (non-patient related, e.g., OERs, SOPs, clerical)____

Professional/educational (non-patient related, e.g., inservices, meetings)____

I don't know how the NPs spend their day____

Other (specify) _____

20. In general, do you feel that your NPs are being appropriately utilized in this hospital?

Yes____

No____ (Please explain)

21. Please check the appropriate block as it applies to the skill level of your NPs: (This was completed only by the internists)

TASK	Perform independently	Perform with supervision	Not competent to perform	Not authorized to perform
Complete physical assessment				
Comprehensive data base and periodic evaluation				
Order selected lab tests				
Order EKGs				
Collect culture and smear specimens				
Perform Pap smears				
Diagnose and treat acute minor illnesses				
Provide primary care for chronically ill patients who are stable				
Prescribe authorized meds				
Initiate referral to other medical/nursing services				
Educate how to care for health maintenance and chronic illnesses				
Educate how to care for acute minor illnesses				
Educate in pre-operative preparation				
Order selected X-ray tests				

21. Please check the appropriate block as it applies to the skill level of your NPs: (This was completed only by the pediatricians)

TASK	Perform independently	Perform with supervision	Not competent to perform	Not authorized to perform
Newborn admission physical				
Newborn discharge physical				
Routine well-baby history and physical				
Well child physical for pre-school, athletics, overseas, and adoption				
Denver Development Screening Test				
Order specific lab tests				
Order specific X-ray tests				
Collect specimens for cultures and smears				
Conduct well-baby clinic				
Provide follow-up care for patients referred by MD				
Provide direct nursing services to select newborns and pediatric inpatients				
Diagnose and treat common minor illnesses				
Prescribe authorized meds				
Initiate referral to other medical/nursing services				
Normal new born care patient education				
Normal infant and child care education				
Normal growth and development education				
Educate patient to care for individual acute and chronic illnesses				

21. Please check the appropriate block as it applies to the skill level of your NPs: (This was completed only by the obstetrics and gynecology physicians)

TASK	Perform independently	Perform with supervision	Not competent to perform	Not authorized to perform
Complete physical assessment of the normal woman				
Routine GYN and breast exam				
Antepartum exams (not initial)				
Normal post-partum clinic exam				
Normal post-partum inpatient exam				
Normal post-partum discharge				
OB History				
GYN History				
Order routine pre-and post-natal lab studies				
Order limited X-ray studies				
Perform Pap smears				
Microscopic exam of vaginal/rectal smear specimens				
Monitor patients during normal labor				
Monitor labor induced by regulated oxytoxic infusion				
Monitor labor for patients with regional anesthesia				
Assist at delivery				
Diagnose and treat minor GYN problems				
Prescribe authorized meds				
Measure and insert diaphragms				
Insert IUD in multiparious women				
Initiate referral to other medical/nursing services				
Family planning				
OB orientation				

TASK	Perform independ-ently	Perform with supervision	Not compe-tent to perform	Not author-ized to perform
Prenatal classes				
Normal new born care				
Post-partum classes				
Preoperative preparation				

APPENDIX I

HEAD NURSE SURVEY QUESTIONNAIRE

HEAD NURSE SURVEY QUESTIONNAIRE

1. Personal data:

Age____

Rank____

Sex: Male____ Female____

Married: Yes____ No____

Number of years in Army Nurse Corps____

Are you taking educational course(s) at present? Yes____No____

If Yes, please identify _____

Area(s) of nursing specialization:

Med____ Peds____ Other (identify) _____

OB/GYN ____ Surg____

OR____ Psych____

Number of years of nursing experience:

Civilian____

Military____

2. How well do you think Nurse Practitioners (NP) are accepted at this hospital by the following individuals:

	Very Well	Satis-factory	Not Well	Not at all	Don't Know
Your ward physicians					
Other physicians					
Head nurses					
Staff nurses					
Nursing supervisors					
Patients					

	Very Well	Satis-factory	Not Well	Not at all	Don't Know
Physician assistants					
Clerical staff					
AMOSISTS					
Pharmacists					

3. Did you have exposure to NPs as a:

	Yes (Indicate number of years)	No
Nursing student		
Registered nurse prior to Moncrief AH		

4. Do you perceive the NP as:

Physician extender_____
or
Independent but limited practitioner_____

5. Do you feel that NPs should be utilized only while there is a physician shortage? Yes____ No____

6. Do you personally feel that NPs were trained primarily to offset the physician shortage? Yes____No____

7. Do you feel Moncrief's NPs are provided adequate:

	Yes	No	Don't Know
Professional Support Personnel (e.g., corpsmen)			
Administrative Support Personnel (e.g., clerks)			
Physical Facilities (e.g., office space)			
Supplies			

8. Which of the following at this hospital do you think hinders NPs from contributing as much as they can? (Rank the 5 most important reasons in descending order, i.e., 1 = hinders their contribution the most)

____lack of confidence

____lack of adequate training in NP course

____lack of experience

____lack of ancillary support personnel

____lack of physical facilities

____resistance of clinic/ward physicians

____resistance of other physicians

____resistance of staff nurses

____resistance of nursing supervisors

____resistance of own patients

____resistance of new patients who have not been treated by a NP

____other (Specify:)_____

9. How often do NPs and you discuss your patients:

____daily

____weekly

____monthly

____quarterly

____never

____other (Specify:)_____

10. Do you personally feel that NPs treat patients too slowly? Yes____No____. If yes, how long should an average patient be seen (in minutes) _____

11. Do you personally feel that NPs and Physician Assistants were intended to fill the same role? Yes____No____Undecided____

12. Should NPs perform duties of non-NP Army nurses (e.g., weekend supervisor)? Yes____ No____

13. Are you comfortable relying on judgment of NPs pertaining to matters within their designated functions? Yes___no___

14. Should NPs make decisions on their own initiative? Yes____No____Depends on complexity of case____

15. Why do you personally feel NPs are utilized at Moncrief AH? (Rank in descending order of importance, i.e., 1 = most important reason for utilizing NP):

____mandated by higher authority

____permit physicians to spend more time on complex cases

____permit physicians to spend more time on other professional matters (e.g., education, ward rounds)

____provide screening mechanism before patient sees physician

____provide treatment for patients previously uncared for

____increase amount of patient education

____increase amount of care given to secondary problems and symptoms

____other (please specify):_____

16. Do you perceive the NP as a
____technician to extend services
or
____physician's colleague capable of working more or less independently

17. How many hours of an average duty day do you think a NP spends in the following:

Direct patient care activities (includes patient documentation)____

Consultation with physicians____

Consultation with other-than-physicians (e.g., nurses, NPs, Pharmacist)____

Administrative (non-patient related, e.g., OERs,SOPs,Clerical)____

Professional/educational (non-patient related, e.g., inservices, meetings) ____

I don't know how the NPs spend their day ____

Other (specify:) _____

18. In general, do you feel that NPs are being appropriately utilized in this hospital? Yes____No____ (Please explain)

19. Please check the appropriate block as you think it applies to the skill level of an Adult Medicine NP (enter "Don't Know" on any line when appropriate):

SKILL	Perform independently	Perform with supervision	Not competent to perform	Not authorized to perform
Complete physical assessment				
Comprehensive data base and periodic evaluation				
Order selected lab tests				
Order EKGs				
Collect culture and smear specimens				
Perform Pap smears				
Diagnose and treat acute minor illnesses				
Provide primary care for chronically ill patients who are stable				
Prescribe authorized meds				
Initiate referral to other medical/nursing services				
Educate how to care for health maintenance and chronic illnesses				
Educate how to care for acute minor illnesses				
Educate in pre-operative preparation				
Order selected X-ray tests				

19. Please check the appropriate block as you think it applies to the skill level of an OB/GYN NP (enter "Don't know" on any line when appropriate):

SKILL	Perform independently	Perform with supervision	Not competent to perform	Not Authorized to perform
Complete physical assessment of the normal woman				
Routine GYN and breast exam				
Antepartum exams (not initial)				
Normal post-partum clinic exam				
Normal post-partum inpatient exam				
Normal post-partum discharge				
OB history				
GYN history				
Order routine pre- and post-natal lab studies				
Order limited X-ray studies				
Perform Pap smears				
Microscopic exam of vaginal/rectal smear specimens				
Monitor patients during normal labor				
Monitor labor induced by regulated oxytoxic infusion				
Monitor labor for patients with regional anesthesia				
Assist at delivery				
Diagnose and treat minor GYN problems				
Prescribe authorized meds				
Measure and insert diaphragms				
Insert IUD in multiparious women				
Initiate referral to other medical/nursing services				

SKILL	Perform independently	Perform with supervision	Not competent to perform	Not Authorized to perform
Family planning				
OB orientation				
Prenatal classes				
Normal new born care				
Post-partum classes				
Pre-operative preparation				

19. Please check the appropriate block as you think it applies to the skill level of a pediatric NP (enter "Don't know" on any line when appropriate):

SKILL	Perform independently	Perform with supervision	Not competent to perform	Not authorized to perform
Newborn admission physical				
Newborn discharge physical				
Routine well-baby history and physical				
Well child physical for pre-school, athletics, overseas, and adoption				
Denver Development Screening Test				
Order specific lab tests				
Order specific X-ray tests				
Collect specimens for cultures and smears				
Conduct well-baby clinic				
Provide follow-up care for patients referred by MD				
Provide direct nursing services to select newborns and pediatric inpatients				
Diagnose and treat common minor illnesses				
Prescribe authorized meds				
Initiate referral to other medical/nursing services				
Normal new born care patient education				
Normal infant and child care education				
Normal growth and development education				
Educate patient to care for individual acute and chronic illnesses				

APPENDIX J

PATIENT SURVEY QUESTIONNAIRE

PATIENT SURVEY QUESTIONNAIRE

Dear Patient:

May we ask for your help? In our continuing effort to provide the best possible patient care, we would sincerely appreciate your completing the following questions. You are part of a small number of patients being questioned; therefore, your response is very important to the accuracy of the survey. Your answers will be treated in complete confidence, and we ask that you not identify yourself. Please answer all questions as completely and candidly as possible. The survey will take only minutes to complete. If you do not understand a question, simply skip it.

When you have completed the form, please leave it with the receptionist at the clinic desk.

Thank you for your assistance.

Ronald P. Hudak

RONALD P. HUDAK
Major, Medical Service Corps
Administrative Resident

1. Age ____

2. Sex: Male ____ Female ____

3. Status: Active Duty____Retired____Dependent of Active Duty____

   Dependent of Retired____Other (Please specify)____

4. Rank (your's or sponsor's)____

5. What is your highest level of education?

   ____less than high school graduate

   ____high school graduate

   ____some college

   ____college bachelor degree

   ____college graduate degree

6. Do you know that a Nurse Practitioner is an Army Nurse Corps officer who has received additional formal education in a specialized area in order to function in an expanded role in ambulatory care settings? Yes____No____

7. If a physician were not available, would you be willing to be treated by a Nurse Practitioner? Yes____No____

8. If there were not a physician shortage, do you think that Moncrief Army Hospital should continue using Nurse Practitioners? Yes____No____

9. Should the Nurse Practitioner be an:
   ____independent practitioner
   or
   ____assistant to the physician

10. In your opinion, please indicate who should perform the following functions: *

	Nurse Practitioner Only	Physician Only	Either Nurse Practitioner or Physician	Undecided	I don't know the function well enough to answer
Complete physical assessment of the normal woman					
Routine GYN and breast exam					
Antepartum exams(Not initial)					
Normal post-partum clinic exam					
Normal post-partum discharge					
OB history					
GYN history					
Order routine pre-and post-natal lab studies					
Order limited X-ray studies					
Perform Pap smears					
Microscopic exam of vaginal/ rectal smear specimens					
Monitor patients during normal labor					
Monitor labor induced by regulated oxytoxic infusion					
Monitor labor for patients with regional anesthesia					
Assist at delivery					

*This was completed only by patients in the OB/GYN Clinic.

10. In your opinion, please indicate who should perform the following functions: *

	Nurse Practitioner Only	Physician Only	Either Nurse Practitioner or Physician	Undecided	I don't know the function well enough to answer
Diagnose and treat minor GYN problems					
Prescribe authorized meds					
Measure and insert diaphragms					
Insert IUD in multi-parious women					
Initiate referral to other medical/nursing services					
Family planning					
OB orientation					
Prenatal classes					
Normal new born care					
Post-partum classes					
Pre-operative preparation					

*This was completed only by patients in the OB/GYN Clinic

10. In your opinion, please indicate who should perform the following functions: *

	Nurse Practitioner Only	Physician Only	Either Nurse Practitioner or Physician	Undecided	I don't know the function well enough to answer
Newborn admission physical					
Newborn discharge physical					
Routine well-baby history and physical					
Well child physical for pre-school, athletics, overseas, and adoption					
Denver Development Screening Test					
Order specific lab tests					
Order specific X-ray tests					
Collect specimens for cultures and smears					
Conduct well-baby clinic					
Provide follow-up care for patients referred by MD					
Provide direct nursing services to select newborns and pediatric inpatients					
Diagnose and treat common minor illnesses					
Prescribe authorized meds					
Initiate referral to other medical/nursing services					

*This was completed only by patients in the pediatric clinic

	Nurse Practitioner Only	Physician Only	Either Nurse Practitioner or Physician	Undecided	I don't know the function well enough to answer
Normal new born care patient education					
Normal infant and child care education					
Normal growth and development education					
Educate Patient to care for individual acute and chronic illnesses					

10. In your opinion, please indicate who should perform the following functions:*

	Nurse Practitioner Only	Physician Only	Either Nurse Practitioner or Physician	Undecided	I don't know the function well enough to answer
Complete physical assessment					
Comprehensive data base and periodic evaluation					
Order selected lab tests					
Order selected x-ray tests					
Order EKGs					
Collect culture and smear specimens					
Perform Pap smears					
Diagnose and treat acute minor illnesses					
Provide primary care for chronically ill patients who are stable					
Prescribe authorized meds					
Initiate referral to other medical/nursing services					
Educate how to care for health maintenance and chronic illnesses					
Educate how to care for acute minor illnesses					
Educate in pre-operative preparation					

*This was completed only by patients in the internal medicine clinic

11. Have you ever been treated by a Nurse Practitioner? Yes____No____

If your answer above is Yes, please continue.
If your answer above is No, please stop and turn in questionnaire to receptionist.

12. Did you receive satisfactory care? Yes____No____Sometimes____

13. In brief, what type of medical condition were you treated for by the Nurse Practitioner?

14. Would you rather have seen a physician? Yes____No____

15. How many different Nurse Practitioners have treated you?____

16. How did you become a patient of the Nurse Practitioner?

____referred by physician

____assigned by appointment system

____referred by another Nurse Practitioner

____personally requested Nurse Practitioner

____other (please specify)____

STOP

PLEASE TURN IN QUESTIONNAIRE TO RECEPTIONIST

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